40/pt. 700-789/990

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Protection of Environment

40

PARTS 700 TO 789

Revised as of July 1, 1990

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PARTS 700 TO 789

Revised as of July 1, 1990

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AS OF JULY 1, 1990

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Cite this Code: **CFR**

To cite the regulations in this volume use title, part and section number. Thus, 40 CFR 700.40 *refers to title 40, part 700, section 40.*

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Title 1 through Title 16	as of January 1
Title 17 through Title 27	as of April 1
Title 28 through Title 41	as of July 1
Title 42 through Title 50	as of October 1

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III). A list of CFR Titles, Chapters, and Parts and an alphabetical list of agencies publishing in the CFR are also included in this volume.

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MARTHA L. GIRARD,
Director,
Office of the Federal Register.

July 2, 1990.

THIS TITLE

Title 40—Protection of Environment is composed of fifteen volumes. The parts in these volumes are arranged in the following order: Parts 1-51, Part 52, Parts 53-60, Parts 61-80, Parts 81-85, Parts 86-99, Parts 100-149, Parts 150-189, Parts 190-259, Parts 260-299, Parts 300-399, Parts 400-424, Parts 425-699, Parts 700-789 and Part 790 to End. A derivation table appears in the volume containing Parts 1-51. The contents of these volumes represent all current regulations codified under this title of the CFR as of July 1, 1990.

Chapter I—Environmental Protection Agency appears in all fifteen volumes. A Pesticide Tolerance Commodity/Chemical Index appears in Parts 150-189. A Toxic Substances Chemical—CAS Number Index appears in Parts 700-789 and Part 790 to End. Distribution Tables appear in the volumes containing Parts 100-149 and Parts 190-299. Redesignation Tables appear in the volumes containing Parts 1-51, Parts 81-85, Parts 86-99, Parts 150-189, and Parts 700-789. Regulations issued by the Council on Environmental Quality appear in the volume containing Part 790 to End.

For this volume, Linda Landis Jones was Chief Editor. The Code of Federal Regulations publication program is under the direction of Richard L. Claypoole, assisted by Alomha S. Morris.

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Title 40—Protection of Environment

(This book contains parts 700 to 789)

Part

PTER I—Environmental Protection Agency 702

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY (Continued)

(This book contains Parts 700 to 789)

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SUBCHAPTER R—TOXIC SUBSTANCES CONTROL ACT

PART 700—GENERAL

Subparts A and B—[Reserved]

Subpart C—Fees

Sec.
700.40 Purpose and applicability.
700.43 Definitions.
700.45 Fee payments.
700.49 Failure to remit fees.

AUTHORITY: 15 U.S.C. 2625.

SOURCE: 53 FR 31252, Aug. 17, 1988, unless otherwise noted.

§ 700.40 Purpose and applicability.

(a) *Purpose.* The purpose of this subpart is to collect fees from manufacturers, importers, and processors who submit notices and applications to EPA under section 5 of the Toxic Substances Control Act (15 U.S.C. 2604) to defray part of EPA's cost of administering the Act.

(b) *Applicability.* This subpart applies to all manufacturers, importers, and processors who submit certain notices and applications to EPA under section 5 of the Act.

§ 700.43 Definitions.

Definitions in section 3 of the Act (15 U.S.C. 2602), as well as definitions contained in §§ 704.3 and 720.3 of this chapter, apply to this subpart unless otherwise specified in this section. In addition, the following definitions apply:

"Consolidated premanufacture notice" or "consolidated PMN" means any PMN submitted to EPA that covers more than one chemical substance (each being assigned a separate PMN number by EPA) as a result of a prenotice agreement with EPA (*See* 48 FR 21734).

"Exemption application" means any application submitted to EPA under section 5(h)(2) of the Act.

"Exemption notice" means any notice submitted to EPA under § 723.175 of this chapter.

"Final product" means a new chemical substance (as "new chemical substance" is defined in § 720.3 of this chapter) that is manufactured by a person for distribution in commerce, or for use by the person other than as an intermediate.

"Intermediate premanufacture notice" or "intermediate PMN" means any PMN submitted to EPA for a chemical substance which is an intermediate (as "intermediate" is defined in § 720.3 of this chapter) in the production of a final product, provided that the PMN for the intermediate is submitted to EPA at the same time as, and together with, the PMN for the final product and that the PMN for the intermediate identifies the final product and describes the chemical reactions leading from the intermediate to the final product. If PMNs are submitted to EPA at the same time for several intermediates used in the production of a final product, each of those is an intermediate PMN if they all identify the final product and every other associated intermediate PMN and are submitted to EPA at the same time as, and together with, the PMN for the final product.

"Joint submitters" means two or more persons who submit a section 5 notice together.

"Person" means a manufacturer, importer, or processor.

"Premanufacture notice" or "PMN" means any notice submitted to EPA pursuant to section 5(a)(1)(A) of the Act in accordance with part 720 of this chapter or § 723.250 of this chapter.

"Section 5 notice" means any PMN, consolidated PMN, intermediate PMN, significant new use notice, exemption notice, or exemption application.

"Significant new use notice" means any notice submitted to EPA pursuant to section 5(a)(1)(B) of the Act in accordance with part 721 of this chapter.

"Small business concern" means any person whose total annual sales in the person's fiscal year preceding the date of the submission of the applicable section 5 notice, when combined with those of the parent company (if any), are less than $40 million.

§ 700.45 Fee payments.

(a) *Persons who must pay fees.* Persons submitting a section 5 notice to EPA shall remit for each such notice the appropriate fee identified in paragraph (b) of this section in accordance with the procedures in paragraph (e) of this section.

(b) *Fees.* Persons shall remit fee payments to EPA as follows:

(1) *Small business concerns.* Small business concerns shall remit a fee of $100 for each section 5 notice submitted.

(2) *Others.* Persons other than small business concerns shall remit fees according to the type of section 5 notice as follows:

(i) *Premanufacture notices and consolidated premanufacture notices.* Persons shall remit a fee of $2,500 for each PMN or consolidated PMN submitted.

(ii) *Intermediate premanufacture notices.* Persons shall remit a fee of $1,000 for each intermediate PMN. However, for the PMN for the final product the person shall submit the fee in paragraph (b)(2)(i) of this section.

(iii) *Significant new use notices.* Persons shall remit a fee of $2,500 for each significant new use notice submitted.

(iv) *Exemption applications.* Persons shall remit a fee of $2,500 for each exemption application submitted under section 5(h)(2) of the Act.

(v) *Exemption notices.* Persons shall remit a fee of $2,500 for each exemption notice submitted under § 723.175 of this chapter.

(c) *No fee required.* Persons are exempt from remitting any fee for submissions under §§ 720.38 and 723.50 of this chapter.

(d) *Joint submitters.* Joint submitters of a section 5 notice are required to remit the appropriate fee identified in paragraph (b) of this section for each section 5 notice regardless of the number of joint submitters for that notice. To qualify for the fee identified in paragraph (b)(1) of this section, each joint submitter of a section 5 notice must qualify as a small business concern under § 700.43.

(e) *Remittance procedure.* (1) Each remittance under this section shall be in United States currency and shall be paid by money order, bank draft, or certified check drawn to the order of the Environmental Protection Agency.

(2) Each remittance shall be sent to the Environmental Protection Agency, HQ Accounting Operations Branch (PM-226), P.O. 360399M, Pittsburgh, PA 15251-6399, ATTN: TSCA User Fee.

(3) Persons who submit a section 5 notice shall place a unique identifying number, which must include the letters "TS" followed by a combination of 6 numbers (letters may be substituted for some numbers), on the front page of each section 5 notice submitted. The same identifying number and the submitter's name must appear on the corresponding fee remittance under this section. If a remittance applies to more than one section 5 notice, the person shall include the name of the submitter, the identifying number for each section 5 notice to which the remittance applies, and the amount of the remittance which applies to each notice. Any remittance not having the identifying name and number described above will be returned to the remitter.

(4)(i) Each person who remits the fee identified in paragraph (b)(1) of this section for a PMN, consolidated PMN, intermediate PMN, or significant new use notice shall write or type the words, "The company named in part 1, section A is a small business concern under 40 CFR 700.43 and has remitted a fee of $100 in accordance with 40 CFR 700.45(b)." under "CERTIFICATION" on Page 2 of the Premanufacture Notice for New Chemical Substances (EPA Form 7710-25 (4-26-83)).

(ii) Each person who remits the fee identified in paragraph (b)(1) of this section for an exemption application under section 5(h)(2) of the Act shall include the words, "Each company identified in this application is a small business concern under 40 CFR 700.43 and has remitted a fee of $100 in accordance with 40 CFR 700.45(b)." in the exemption application.

(iii) Each person who remits the fee identified in paragraph (b)(1) of this section for an exemption notice under § 723.175 of this chapter shall include the words, "Each company identified in this notice is a small business concern under 40 CFR 700.43 and has remitted a fee of $100 in accordance with 40 CFR 700.45(b)." in the certification required in § 723.175(i)(1)(x) of this chapter.

(5)(i) Each person who remits a fee identified in paragraph (b)(2) of this section for a PMN, consolidated PMN, intermediate PMN, or significant new use notice shall write or type the words, "The company named in part 1, section A has remitted the fee specified in 40 CFR 700.45 (b)." under "CERTIFICATION" on page 2 of the Premanufacture Notice for New Chemical Substances (EPA Form 7710-25 (4-26-83)).

(ii) Each person who remits the fee identified in paragraph (b)(2) of this section for an exemption application under section (5)(h)(2) of the Act shall include the words, "Each company identified in this application has remitted a fee of $2,500 in accordance with 40 CFR 700.45(b)." in the exemption application.

(iii) Each person who remits the fee identified in paragraph (b)(2) of this section for an exemption notice under § 723.175 of this chapter shall include the words, "Each company identified in this notice has remitted a fee of $2,500 in accordance with 40 CFR 700.45(b)." in the certification required in § 723.175(i)(1)(x) of this chapter.

(f) *Fee refunds.* EPA will refund any fee paid for a section 5 notice whenever the Agency determines:

(1) That the chemical substance that is the subject of a PMN, intermediate PMN, exemption application, or exemption notice is not a new chemical substance as of the date of submission of the notice.

(2) In the case of a significant new use notice, that the notice was not required.

(3) The notice is incomplete under § 720.65(c) of this chapter.

(Approved by the Office of Management and Budget under Control Number 2070-0012 and 2070-0038)

[53 FR 31252, Aug. 17, 1988, as amended at 54 FR 21429, May 18, 1989]

§ 700.49 Failure to remit fees.

EPA will not consider a section 5 notice to be complete unless the appropriate certification under § 700.45(e) is included and until the appropriate remittance under § 700.45(b) has been sent to EPA as provided in § 700.45(e) and received by EPA. EPA will notify the submitter that the section 5 notice is incomplete in accordance with § 720.65(c) of this chapter.

PART 702—GENERAL PRACTICES AND PROCEDURES

Subparts A-B—[Reserved]

Subpart C—Citizen Suit

Sec.
702.60 Purpose.
702.61 Service of notice.
702.62 Contents of notice.

AUTHORITY: 15 U.S.C. 2619.

SOURCE: 47 FR 2773, Jan. 19, 1982, unless otherwise noted.

Subparts A-B—[Reserved]

Subpart C—Citizen Suit

§ 702.60 Purpose.

Section 20 of the Toxic Substances Control Act (TSCA) authorizes any person to begin a civil action to compel performance by the Environmental Protection Agency (EPA) of TSCA non-discretionary acts or duties (section 20(a)(2)) or to restrain any violation of TSCA, or of any rule promulgated under sections 4, 5, or 6, or of any order issued under section 5 of TSCA (section 20(a)(1)). The purpose of this regulation is to prescribe procedures governing the giving of a notice of intent to file suit required by section 20(b) of TSCA as a prerequisite to beginning such civil actions.

§ 702.61 Service of notice.

(a) *Notice as a prerequisite to suit.* Under section 20 of TSCA, no civil action may be commenced by a citizen to restrain a violation of TSCA, or a rule or order thereunder, unless at least 60 days in advance the citizen has given notice of the intent to file suit to the Administrator and to the person who is alleged to have committed the violation. No civil action may be commenced by a citizen to compel the Administrator to perform any non-discretionary act or duty under TSCA, unless at least 60 days in advance the citizen has given notice of the intent to file suit to the Administrator. However, in the case of an alleged failure by the Administrator to file an action under section 7 of TSCA, the citizen must give notice to the Administrator only 10 days in advance of filing the civil action.

(b) *Method of service.* Notice of intent to file suit can be either personally served or served by certified mail—return receipt requested—to persons identified in paragraph (d) of this section.

(c) *Date of service.* The effective date of service of a notice given in accordance with this rule shall be the date of the return receipt, if served by mail, or the date of receipt if personally served.

(d) *Persons to be served*—(1) *Violations of TSCA rules or TSCA order.* (i) If the alleged violator is a private individual or a corporation, notice of intent to file suit shall be served on the individual or the owner or managing agent of the plant, facility, or activity alleged to be in violation. If the alleged violator is a corporation, a copy of the notice shall also be sent to the registered agent, if any, of such corporation in the State in which such violation is alleged to have occurred. Notice shall also be served on the Administrator of the EPA.

(ii) If the alleged violator is a State or local government entity, notice of intent to file suit shall be served on the head of the agency. Notice shall also be served on the Administrator of the EPA, and a copy shall be sent to the Attorney General of the United States.

(iii) If the alleged violator is a Federal agency, notice of intent to file suit shall be served on the head of the agency. Notice shall also be served on the Administrator of the EPA, and a copy shall be sent to the Attorney General of the United States.

(2) *Performance of non-discretionary TSCA acts or duties.* Notice of intent to file suit shall be served on the Administrator of the EPA and a copy shall be sent to the Attorney General of the United States.

(3) *Address of persons to be served.* (i) EPA Administrator: 401 M St., SW., Washington, DC 20460. (ii) Attorney General of the United States: 10th and Constitution Avenue, NW., Washington, DC 20530.

§ 702.62 Contents of notice.

(a) *Violation of TSCA rule or TSCA order.* Notice of intent to file suit regarding an alleged violation of TSCA or any rule promulgated under sections 4, 5, or 6, or an order issued under section 5, shall include sufficient information to permit the recipient to identify:

(1) The specific provision of TSCA or of the rule or order under TSCA alleged to have been violated.

(2) The activity alleged to constitute a violation.

(3) The person or persons responsible for the alleged violation.

(4) The location of the alleged violation.

(5) The date or dates of the alleged violation as closely as the citizen is able to specify them.

(6) The full name, address, and telephone number of the citizen giving notice.

(b) *Failure to act.* Notice regarding an alleged failure of the Administrator to perform any act or duty which is not discretionary shall:

(1) Identify the specific provision of TSCA which requires an act or creates a duty.

(2) Describe with reasonable specificity the action taken or not taken by the Administrator which is alleged to constitute a failure to perform the act or duty.

(3) State the full name, address, and telephone number of the citizen giving the notice.

(c) *Identification of Counsel.* The notice shall state the name, address, and telephone number of the Legal Counsel, if any, representing the citizen giving the notice.

PART 704—REPORTING AND RECORDKEEPING REQUIREMENTS

Subpart A—General Reporting and Recordkeeping Provisions for Section 8(a) Information-Gathering Rules

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704.3 Definitions.
704.5 Exemptions.
704.7 Confidential business information claims.
704.9 Where to send reports.
704.11 Recordkeeping.
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704.205 Limitations on reporting requirements.
704.206 Persons who must report.
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Sec.

Subpart D—CAIR Specific Reporting and Recordkeeping Requirements

704.220 Chemical substance matrix requirements.
704.223 Reporting period.
704.225 Chemical substance matrix by CAS registry number and trade name matrix in alphabetical order.

AUTHORITY: 15 U.S.C. 2607(a).

Subpart A—General Reporting and Recordkeeping Provisions for Section 8(a) Information-Gathering Rules

§ 704.1 Scope.

(a) This part specifies reporting and recordkeeping procedures under section 8(a) of the Toxic Substances Control Act (TSCA) for manufacturers, importers, and processors of chemical substances and mixtures (hereafter collectively referred to as substances) that are identified in subpart B or D of this part. The reporting and recordkeeping provisions in subpart A of this part apply throughout this part unless revised in any other subpart.

(b) Subpart B of this part sets out chemical-specific reporting and recordkeeping requirements under section 8(a) of TSCA.

(c) Subpart C of this part sets out the general reporting provisions for the Comprehensive Assessment Information Rule (CAIR). CAIR standardizes certain section 8(a) rules by: providing a set of uniform questions for EPA and other agencies to use in assembling specific reporting requirements; requiring the submission of information on a standard reporting form; and establishing uniform reporting and recordkeeping provisions that supplement the reporting and recordkeeping provisions in subpart A of this part. CAIR provisions apply only to those persons who manufacture, import, or process a substance identified in subpart D of this part during the time period for which reporting is required.

(d) subpart D of this part contains a matrix that identifies the substances for which EPA requires reporting under subpart C, the persons who must report the information to EPA, he information that must be reported, the coverage period (as that term s defined in § 704.203), and the effecive date of the final rule.

53 FR 51715, Dec. 22, 1988]

704.3 Definitions.

All definitions as set forth in section of TSCA apply in this part. In addiion, the following definitions are proided for the purposes of this part.

"Annual" means the corporate fiscal ear.

"Article" means a manufactured em (1) which is formed to a specific hape or design during manufacture, 2) which has end use function(s) deendent in whole or in part upon its hape or design during end use, and 3) which has either no change of hemical composition during its end se or only those changes of composiion which have no commercial purose separate from that of the article, nd that result from a chemical reacion that occurs upon end use of other hemical substances, mixtures, or artiles; except that fluids and particles re not considered articles regardless f shape or design.

"Byproduct" means a chemical subance produced without a separate ommercial intent during the manuacture, processing, use, or disposal of nother chemical substance(s) or ixture(s).

"CAS Number" means Chemical Abracts Service Registry Number.

"Coproduct" means a chemical subance produced for a commercial purose during the manufacture, processg, use, or disposal of another chemil substance or mixture.

"Customer" means any person to hom a manufacturer, importer, or rocessor directly distributes any uantity of a chemical substance, mixire, mixture containing the substance mixture, or article containing the ibstance or mixture, whether or not sale is involved.

"Domestic" means within the geoaphical boundaries of the 50 United ates, including the District of Combia, the Commonwealth of Puerto ico, the Virgin Islands, Guam, Ameran Samoa, the Northern Mariana Isnds, and any other territory or posssion of the United States.

"Enclosed process" means a manufacturing or processing operation that is designed and operated so that there is no intentional release into the environment of any substance present in the operation. An operation with fugitive, inadvertent, or emergency pressure relief releases remains an enclosed process so long as measures are taken to prevent worker exposure to and environmental contamination from the releases.

"EPA" means the United States Environmental Protection Agency.

"Import" means to import for commercial purposes.

"Import for commercial purposes" means to import with the purpose of obtaining an immediate or eventual commercial advantage for the importer, and includes the importation of any amount of a chemical substance or mixture. If a chemical substance or mixture containing impurities is imported for commercial purposes, then those impurities also are imported for commercial purposes.

"Import in bulk form" means to import a chemical substance (other than as part of a mixture or article) in any quantity, in cans, bottles, drums, barrels, packages, tanks, bags, or other containers, if the chemical substance is intended to be removed from the container and the substance has an end use or commercial purpose separate from the container.

"Importer" means (1) any person who imports any chemical substance or any chemical substance as part of a mixture or article into the customs territory of the United States, and includes:

(i) The person primarily liable for the payment of any duties on the merchandise, or

(ii) An authorized agent acting on his behalf (as defined in 19 CFR 1.11).

(2) Importer also includes, as appropriate:

(i) The consignee.

(ii) The importer of record.

(iii) The actual owner if an actual owner's declaration and superseding bond have been filed in accordance with 19 CFR 141.20.

(iv) The transferee, if the right to draw merchandise in a bonded warehouse has been transferred in accordance with subpart C of 19 CFR part 144.

(3) For the purposes of this definition, the customs territory of the United States consists of the 50 States, Puerto Rico, and the District of Columbia.

"Impurity" means a chemical substance which is unintentionally present with another chemical substance.

"Intermediate" means any chemical substance that is consumed, in whole or in part, in chemical reactions used for the intentional manufacture of other chemical substances or mixtures, or that is intentionally present for the purpose of altering the rates of such chemical reactions.

"Known to or reasonably ascertainable by" means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.

"Manufacture" means to manufacture for commercial purposes.

"Manufacture for commercial purposes" means: (1) To import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes among other things, such "manufacture" of any amount of a chemical substance or mixture:

(i) For commercial distribution, including for test marketing.

(ii) For use by the manufacturer, including use for product research and development, or as an intermediate.

(2) Manufacture for commercial purposes also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including both byproducts that are separated from that other substance or mixture and impurities that remain in that substance or mixture. Such byproducts and impurities may, or may not, in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose.

"Manufacturer" means a person who imports, produces, or manufactures a chemical substance. A person who extracts a component chemical substance from a previously existing chemical substance or a complex combination of substances is a manufacturer of that component chemical substance.

"Non-isolated intermediate" means any intermediate that is not intentionally removed from the equipment in which it is manufactured, including the reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel, and any equipment through which the substance passes during a continuous flow process, but not including tanks or other vessels in which the substance is stored after its manufacture. Mechanical or gravity transfer through a closed system is not considered to be intentional removal, but storage or transfer to shipping containers "isolates" the substance by removing it from process equipment in which it is manufactured.

"Own or control" means ownership of 50 percent or more of a company's voting stock or other equity rights, or the power to control the management and policies of that company. A company may own or control one or more sites. A company may be owned or controlled by a foreign or domestic parent company.

"Parent company" is a company that owns or controls another company.

"Person" includes any individual, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity; any State or political subdivision thereof; any municipality; any interstate body; and any department, agency, or instrumentality of the Federal Government.

"Possession or control" means in the possession or control of any person, or of any subsidiary, partnership in which the person is a general partner, parent company, or any company or partnership which the parent company owns or controls, if the subsidiary, parent company, or other company or partnership is associated with the person in the research, development, test marketing, or commercial marketing of the substance in question. Information is in the possession or control of a person if it is:

(1) In the person's own files including files maintained by employees of the person in the course of their employment.

(2) In commercially available data bases to which the person has purchased access.

(3) Maintained in the files in the course of employment by other agents of the person who are associated with research, development, test marketing, or commercial marketing of the chemical substance in question.

"Process" means to process for commercial purposes.

"Process for commercial purposes" means the preparation of a chemical substance or mixture after its manufacture for distribution in commerce with the purpose of obtaining an immediate or eventual commercial advantage for the processor. Processing of any amount of a chemical substance or mixture is included in this definition. If a chemical substance or mixture containing impurities is processed for commercial purposes, then the impurities also are processed for commercial purposes.

"Processor" means any person who processes a chemical substance or mixture.

"Production volume" means the quantity of a substance which is produced by a manufacturer, as measured in kilograms or pounds.

"Propose to manufacture, import, or process" means that a person has made a firm management decision to commit financial resources for the manufacture, import, or processing of a specified chemical substance or mixture.

"Site" means a contiguous property unit. Property divided only by a public right-of-way shall be considered one site. There may be more than one plant on a single site. The site for a person who imports a substance is the site of the operating unit within the person's organization which is directly responsible for importing the substance and which controls the import transaction and may in some cases be the organization's headquarters office in the United States.

"Small manufacturer or importer" means a manufacturer or importer that meets either of the following standards:

(1) *First standard.* A manufacturer or importer of a substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $40 million. However, if the annual production or importation volume of a particular substance at any individual site owned or controlled by the manufacturer or importer is greater than 45,400 kilograms (100,000 pounds), the manufacturer or importer shall not qualify as small for purposes of reporting on the production or importation of that substance at that site, unless the manufacturer or importer qualifies as small under standard (2) of this definition.

(2) *Second standard.* A manufacturer or importer of a substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of substances produced or imported by that manufacturer or importer.

(3) *Inflation index.* EPA shall make use of the Producer Price Index for Chemicals and Allied Products, as compiled by the U.S. Bureau of Labor Statistics, for purposes of determining the need to adjust the total annual sales values and for determining new sales values when adjustments are made. EPA may adjust the total annual sales values whenever the Agency deems it necessary to do so, provided that the Producer Price Index for Chemicals and Allied Products has changed more than 20 percent since either the most recent previous change in sales values or the date of promulgation of this rule, whichever is later. EPA shall provide FEDERAL REGISTER notification when changing the total annual sales values.

"Small quantities solely for research and development" (or "small quantities solely for purposes of scientific experimentation or analysis or chemical research on, or analysis of, such substance or another substance, including such research or analysis for the development of a product") means quantities of a chemical substance manufactured, imported, or processed or proposed to be manufactured, imported, or processed solely for research and development that are not greater than reasonably necessary for such purposes.

"Substance" means either a chemical substance or mixture unless otherwise indicated.

"Test marketing" means the distribution in commerce of no more than a predetermined amount of a chemical substance, mixture, article containing that chemical substance or mixture, or a mixture containing that substance, by a manufacturer or processor, to no more than a defined number of potential customers to explore market capability in a competitive situation during a predetermined testing period prior to the broader distribution of that chemical substance, mixture, or article in commerce.

"Total annual sales" means the total annual revenue (in dollars) generated by the sale of all products of a company. Total annual sales must include the total annual sales revenue of all sites owned or controlled by that company and the total annual sales revenue of that company's subsidiaries and foreign or domestic parent company, if any.

"TSCA" means the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

[53 FR 51715, Dec. 22, 1988]

§ 704.5 Exemptions.

A person who is subject to reporting requirements for a substance identified in this part is exempt from those requirements to the extent that the person and that person's use of the substance is described in this section. This section is superseded by any TSCA section 8(a) rule that adds to, removes, or revises the exemptions described in this section.

(a) *Articles.* A person who imports, processes, or proposes to import or process a substance identified in this part solely as part of an article is exempt from the reporting requirements of this part with regard to that substance.

(b) *Byproducts.* A person who manufactures, imports, or proposes to manufacture or import a substance identified in this part solely as a byproduct is exempt from the reporting requirements of this part.

(c) *Impurities.* A person who manufactures, imports, processes, or proposes to manufacture, import, or process a substance identified in this part solely as an impurity is exempt from the reporting requirements of this part.

(d) *Non-isolated intermediate.* A person who manufactures or proposes to manufacture a substance identified in this part solely as a non-isolated intermediate is exempt from the reporting requirements of this part.

(e) *Research and development.* A person who manufactures, imports, processes, or proposes to manufacture, import, or process a substance identified in this part only in small quantities solely for research and development is exempt from the reporting requirements of this part.

(f) *Small manufacturers and importers.* Small manufacturers and importers are exempt from the reporting requirements of this part.

[53 FR 51717, Dec. 22, 1988]

§ 704.7 Confidential business information claims.

(a) Any person submitting a notice under this rule may assert a business confidentiality claim covering all or any part of the notice. Any information covered by a claim will be disclosed by EPA only to the extent and by means of the procedures set forth in part 2 of this title.

(b) If no claim accompanies the notice at the time it is submitted to EPA, the notice will be placed in an open file available to the public without further notice to the respondent.

(c) To assert a claim of confidentiality for data contained in a notice, the respondent must submit two copies of the notice.

(1) One copy of the notice must be complete. In that copy the respondent must indicate what data, if any, are claimed as confidential by marking the specific information on each page with a label such as "confidential", "proprietary", or "trade secret".

(2) If some data in the notice are claimed as confidential, the respondent must submit a second copy. The

second copy must be complete except that all information claimed as confidential in the first copy must be deleted.

(3) The first copy of the notice will be for internal use by EPA. The second copy will be placed in an open file to be available to the public.

(4) Failure to furnish a second copy of the notice when information is claimed as confidential in the first copy will be considered a presumptive waiver of the claim of confidentiality. EPA will notify the respondent by certified mail that a finding of a presumptive waiver of the claim of confidentiality has been made. The respondent has 15 days from the date of receipt of notification to submit the required second copy. Failure to submit the second copy will cause EPA to place the first copy in the public file.

(d) In submitting a claim of confidentiality, a person attests to the truth of the following four statements concerning all information which is claimed confidential:

(1) My company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

(2) The information is not, and has not been, reasonably obtainable without our consent by other persons (other than government bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).

(3) The information is not publicly available elsewhere.

(4) Disclosure of the information would cause substantial harm to our competitive position.

[48 FR 23420, May 25, 1983, as amended at 53 FR 51717, Dec. 22, 1988]

§ 704.9 Where to send reports.

Reports must be submitted by certified mail to: TSCA Document Processing Center (TS-790), Office of Toxic Substances, U.S. Environmental Protection Agency, Room L-100, 401 M St., SW., Washington, DC 20460. ATTENTION: 8(a) Reporting.

[53 FR 51717, Dec. 22, 1988]

§ 704.11 Recordkeeping.

Each person who is subject to the reporting requirements of this part must retain the following records for 3 years following the creation or compilation of the record.

(a) A copy of each report submitted by the person in response to the requirements of this part.

(b) Materials and documentation sufficient to verify or reconstruct the values submitted in the report.

(c) A copy of each notice sent by the person, return receipt requested, to that person's customers for the purpose of notifying their customers of the customer's reporting obligations under this part.

(d) All return receipts signed by the person's customers who received the notice described in paragraph (c) of this section.

(Approved by the Office of Management and Budget under OMB control number 2010-0019)

[53 FR 51717, Dec. 22, 1988]

§ 704.13 Compliance and enforcement.

Violators of the requirements of this part may be subject to civil administrative penalties up to $25,000 per day of violation or criminal prosecution, as provided in sections 15 and 16 of TSCA. In addition, under section 17, EPA may seek judicial relief to compel submission of required information.

[53 FR 51717, Dec. 22, 1989]

Subpart B—Chemical-Specific Reporting and Recordkeeping Rules

§ 704.25 11-Aminoundecanoic acid.

(a) *Definitions.* (1) "11-AA" means the chemical substance 11-aminoundecanoic acid, CAS Number 2432-99-7.

(2) "Enclosed process" means a process that is designed and operated so that there is no intentional release of any substance present in the process. A process with fugitive, inadvertent, or emergency pressure relief releases remains an enclosed process so long as measures are taken to prevent worker exposure to an environmental contamination from the releases.

(3) "Internal subunit" means a subunit that is covalently linked to at

least two other subunits. "Internal subunits" of polymer molecules are chemically derived from monomer molecules that have formed covalent links between two or more other molecules.

(4) "Monomer" means a chemical substance that has the capacity to form links between two or more other molecules.

(5) "Polymer" means a chemical substance that consists of at least a simple weight majority of polymer molecules but consists of less than a simple weight majority of molecules with the same molecular weight. Collectively, such polymer molecules must be distributed over a range of molecular weights wherein differences in molecular weight are primarily attributable to differences in the number of internal subunits.

(6) "Polymer molecule" means a molecule which includes at least four covalently linked subunits, at least two of which are internal subunits.

(7) "Small processor" means a processor that meets either the standard in paragraph (a)(7)(i) of this section or the standard in paragraph (a)(7)(ii) of this section.

(i) *First standard.* A processor of a chemical substance is small if its total annual sales, when combined with those of its parent company, if any, are less than $40 million. However, if the annual processing volume of a particular chemical substance at any individual site owned or controlled by the processor is greater than 45,400 kilograms (100,000 pounds), the processor shall not qualify as small for purposes of reporting on the processing of that chemical substance at that site, unless the processor qualifies as small under paragraph (a)(7)(ii) of this section.

(ii) *Second standard.* A processor of a chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of the particular chemical substance processed by that company.

(iii) *Inflation index.* EPA will use the Inflation Index described in the definition of "small manufacturer" set forth in § 704.3, for purposes of adjusting the total annual sales values of this small processor definition. EPA will provide notice in the FEDERAL REGISTER when changing the total annual sales values of this definition.

(8) "Subunit" means an atom or group of associated atoms chemically derived from corresponding reactants.

(b) *Persons who must report.* Except as provided in paragraph (c) of this section, the following persons are subject to this section:

(1) Persons who manufacture or propose to manufacture 11-AA:

(i) For use as an intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process, or

(ii) For use as a component in photoprocessing solutions.

(2) Persons who import or propose to import 11-AA:

(i) For use as an intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process, or

(ii) For use as a component in photoprocessing solutions.

(3) Persons who process or propose to process 11-AA:

(i) For use as an intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process, or

(ii) For use as a component in photoprocessing solutions.

(c) *Persons not subject to this section.* The following persons are not subject to this section:

(1) Small manufacturers (includes importers) as described in § 704.3.

(2) Small processors.

(3) Persons described in § 704.5.

(4) Persons who, at any time during the 3-year period ending July 22, 1986, manufactured, imported, or processed 11-AA:

(i) For use as a intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process, or

(ii) For use as a component in photoprocessing solutions.

(d) *What information to report.* Persons identified in paragraph (b) of this section must submit a Premanufacture

Notice Form (EPA Form 7710-25) as described at 40 CFR part 720, Appendix A.

(e) *When to report.* (1) Persons who intend to manufacture, import, or process 11-AA for use as an intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process or for use as a component in photoprocessing solutions must notify EPA within 30 days after making a firm management decision to commit financial resources for the manufacturing, importing, or processing of 11-AA.

(2) Persons who initiated manufacturing, importing, or processing of 11-AA for use as an intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-AA will be fully polymerized during the manufacturing process, or for use as a component in photoprocessing solutions during the time period between July 22, 1986 and July 13, 1987 must notify EPA by August 10, 1987.

(f) *Recordkeeping.* Persons subject to the reporting requirements of this section must retain documentation of information contained in their reports for a period of 5 years from the date of submission of the report.

(g) *Where to send reports.* Reports must be submitted by certified mail to: Document Control Officer (TS-790), Office of Toxic Substances, United States Environmental Protection Agency, Room 201 East Tower, 401 M Street SW, Washington, DC 20460. ATTN: 11-AA Notification.

[52 FR 19864, May 28, 1987]

§ 704.30 Anthraquinone.

(a) *Substance for which reporting is required.* The chemical substance for which reporting is required under this section is 9,10-anthraquinone (Chemical Abstract Service Registry Number 84-65-1).

(b) *Persons who must report.* Unless exempt as provided in § 704.5, persons (other than small manufacturers and importers) who manufacture or import 9,10-anthraquinone for commercial purposes after July 20, 1987 are subject to the reporting requirements of this section. Persons may be required to report more than once in response to this section.

(c) *When to report.* Persons described in paragraph (b) of this section must submit a report within 60 days of the completion of every corporate fiscal year during which they manufactured or imported 9,10-anthraquinone after July 20, 1987. Persons must submit a separate report for each corporate fiscal year in which they are subject to this section.

(d) *What information to report.* All persons subject to this section shall report the following information to EPA.

(1) Company name and headquarters address.

(2) Name, address, and telephone number (including area code) of the company's principal technical contact.

(3) The quantity (in pounds) of 9,10-anthraquinone manufactured or imported during the person's latest complete corporate fiscal year.

(e) *Where to send reports.* Reports must be submitted by certified mail to the Document Control Office, Environmental Protection Agency, TS-790, 401 M St., SW., Washington, DC 20460. Attn: TSCA 8(a).

[52 FR 21026, June 4, 1987]

§ 704.33 P-tert-butylbenzoic acid (P-TBBA), p-tert-butyltoluene (P-TBT) and p-tert-butylbenzaldehyde (P-TBB).

(a) *Definitions.* (1) "P-TBBA" means the substance p-tert-butylbenzoic acid, also identified as 4-(1,1-dimethylethyl)benzoic acid, CAS No. 98-73-7.

(2) "P-TBT" means the substance p-tert-butyltoluene, also identified as 1-(1,1-dimethylethyl)-4-methylbenzene, CAS No. 98-51-1.

(3) "P-TBB" means the substance p-tert-butylbenzaldehyde, also identified as 4-(1,1-dimethylethyl)benzaldehyde, CAS No. 939-97-9.

(4) "Small processor" means a processor that meets either the standard in paragraph (a)(4)(i) of this section or the standard in paragraph (a)(4)(ii) of this section.

(i) *First standard.* A processor of a chemical substance is small if its total annual sales, when combined with those of its parent company, if any, are less than $40 million. However, if the annual processing volume of a particular chemical substance at any individual site owned or controlled by the processor is greater than 45,400 kilograms (100,000 pounds), the processor shall not qualify as small for purposes of reporting on the processing of that chemical substance at that site, unless the processor qualifies as small under paragraph (a)(1)(ii) of this section.

(ii) *Second standard.* A processor of a chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of the particular chemical substance processed by that company.

(iii) *Inflation index.* EPA shall use the Inflation Index described in the definition of "small manufacturer" that is set forth in § 704.3, for purposes of adjusting the total annual sales values of this small processor definition. EPA shall provide FEDERAL REGISTER notification when changing the total annual sales values of this definition.

(b) *Persons who must report.* Except as provided in paragraph (c) of this section, the following persons are subject to the reporting requirements of this rule; a person may become subject to this rule more than once, for more than one substance or under more than one of the criteria listed in this paragraph (b).

(1) Persons who manufactured, imported, or processed P-TBBA, P-TBT, and/or P-TBB for commercial purposes during the person's latest complete corporate fiscal year prior to June 25, 1986. For purposes of this provision, processors of P-TBBA, P-TBT, and/or P-TBB shall include only those persons who processed the substances other than as non-isolated intermediates.

(2) Persons who commence manufacture or importation of P-TBBA, P-TBT, and/or P-TBB for commercial purposes after June 25, 1986. This provision is applicable to persons who cease manufacture or importation of P-TBBA, P-TBT, and/or P-TBB after June 25, 1986 and then subsequently resume manufacture or importation of the substance(s).

(3) Persons who process P-TBBA, P-TBT, and/or P-TBB for commercial purposes in any way other than as a non-isolated intermediate after June 25, 1986.

(c) *Persons not subject to this rule.* In addition to the persons described in § 704.5, small processors, as defined in paragraph (a)(4) of this section, are not subject to this rule.

(d) *Information to report.* Persons subject to this rule as described in paragraph (b) of this section shall report information to EPA as specified in this paragraph (d). Respondents to this rule shall report all information that is known to or reasonably ascertainable by the person reporting. For purposes of importer reporting under this paragraph, a site is the operating unit within the person's organization which is directly responsible for importing the substance and which controls the import transaction. The import site may in some cases be the organization's headquarters office in the United States.

(1) All manufacturers, importers, and processors specified in paragraph (b) of this section shall report their name and headquarters address.

(2) All manufacturers, importers, and processors specified in paragraph (b) of this section shall report the name, address, and office telephone number (including area code) of their principal technical contact.

(3) All manufacturers, importers, and processors specified in paragraph (b) of this section shall report the name and address of each site where P-TBBA, P-TBT, and/or P-TBB is manufactured, imported, or processed.

(4) All manufacturers, importers, and processors specified in paragraph (b)(1) of this section only shall report the information described in this paragraph (d)(4). Respondents to this paragraph (d)(4) shall report separately for each substance that they manufacture, import, or process, and for each site at which they do so. However, if the information to be reported in response to this paragraph (d)(4) is the same for different sites, the respondent need not report separately for each site but need only notify EPA that the information is the same for each site. The information to be re-

ted under this paragraph (d)(4)
ll cover the respondent's latest
nplete corporate fiscal year prior to
ne 25, 1986. Respondents to this
agraph (d)(4) shall report the fol-
ing information:

) The total quantity (by weight) of
TBBA, P-TBT, or P-TBB manufac-
ed, imported, or processed for com-
rcial purposes per site.

i) A narrative description of the
nufacturing, importing, or process-
operation(s) involving P-TBBA, P-
T, or P-TBB at each site.

ii) A narrative description of
rker activities involving P-TBBA,
TBT, or P-TBB at each site, includ-
the number of workers potentially
osed to each substance and, if ap-
cable, the number of workers poten-
ly exposed to more than one sub-
nce.

v) The potential routes of worker
osure to P-TBBA, P-TBT, or P-
B at each site (e.g., inhalation, in-
tion, dermal absorption).

) Available monitoring data from
ployee breathing zones with poten-
exposure to P-TBBA, P-TBT, or
TBB at each site, including a de-
iption of the method of monitoring,
number of samples taken, and the
ential number of workers similarly
osed for each worker job category.
spondents to this paragraph
4)(v) shall submit data showing a
ge of 8-hour time weighted aver-
s (TWAs), provided that the data
available in that form. Respond-
s also shall submit a calculated geo-
tric mean of these data, with an ex-
nation of the method by which the
an was derived. However, if the
nitoring data are not available in
form of 8-hour TWAs, respondents
ll submit raw sample data results
l the duration time of sampling for
h job category.

vi) A narrative description of any
sonal protective equipment and/or
gineering controls used to prevent
osure to P-TBBA, P-TBT, or P-
B at each site.

vii) A listing of the estimated quan-
es of P-TBBA, P-TBT, or P-TBB
eased directly into air, water, or
d from each site.

viii) A narrative description of the
es during the manufacturing, importing, or processing operations involving P-TBBA, P-TBT, or P-TBB when environmental release occurs at each site.

(ix) A narrative description of any engineering controls used to prevent environmental release of P-TBBA, P-TBT, or P-TBB at each site.

(x) A narrative description of all known end uses of any P-TBBA, P-TBT, or P-TBB that is manufactured, imported, or processed by the respondent. The narrative need not include customer identity.

(xi) A narrative description of the methods used at each site for disposing of wastes generated during the manufacture, importation, or processing of P-TBBA, P-TBT, or P-TBB, including the quantity and content of such wastes (per site), the method of disposal, and an identification of the disposal site(s).

(5) All manufactureres, importers, and processors specified in paragraph (b) of this section shall report the information described in this paragraph (d)(5). Respondents to this paragraph (d)(5) shall report separately for each substance that they intend to manufacture, import, or process during the first 2 years following the date on which they become subject to this rule. The data reported under this paragraph (d)(5) shall cover that 2-year period. Respondents to this paragraph (d)(5) shall report separately for each site at which they intend to manufacture, import, or process each substance. Respondents need not comply with this paragraph (d)(5) if the information to be reported is identical to that reported by the respondent under paragraph (d)(4) of this section, provided that the respondent makes note of that fact to EPA. Respondents to this paragraph (d)(5) shall report the following information:

(i) An estimate of the total quantity (by weight) of P-TBBA, P-TBT, or P-TBB that the respondent intends to manufacture, import, or process for commercial purposes per site during each of the first 2 years following the date on which the respondent becomes subject to this rule.

(ii) A narrative description of the intended manufacturing, importing, or processing activities involving P-

TBBA, P-TBT, or P-TBB at each site during the first 2 years following the date on which the respondent becomes subject to this rule. The description shall include a summary of the intended manufacturing, importing, or processing operation(s); a summary of intended worker activities involving the substances, including an estimate of the number of persons anticipated to be exposed annually to P-TBBA, P-TBT, or P-TBB (per site) during the 2-year period, the anticipated routes of worker exposure to the substances (e.g., inhalation, ingestion, dermal absorption); and a summary of any personal protective equipment and/or engineering controls that the respondent intends to use to prevent exposure to the substances.

(iii) A narrative description of anticipated environmental releases of P-TBBA, P-TBT, or P-TBB at each site from the manufacture, importation, or processing of these substances during the first 2 years following the date on which the respondent becomes subject to this rule. The narrative shall include the anticipated quantities of each substance released directly into air, water, or land, the anticipated routes of environmental release, and any intended engineering controls to be used to prevent environmental release of the substances.

(iv) A narrative description of all anticipated end uses or P-TBBA, P-TBT, or P-TBB resulting from the respondent's manufacture, importation, or processing of the substances during the first 2 years following the date on which the respondent becomes subject to this rule. The summary need not include customer identity.

(v) A narrative summary of the anticipated disposal of wastes generated from the manufacture, importation, or processing of P-TBBA, P-TBT, or P-TBB during the first 2 years following the date on which the respondent becomes subject to this rule. The summary shall include the anticipated quantity and content of such wastes (per site), the intended method of disposal, and an identification of intended disposal site(s).

(e) *When to report.* Persons subject to this rule must submit the requisite information to EPA within 60 days of becoming subject to the rule under the standards set forth in paragraph (b) of this section.

(f) *Certification.* Persons subject to this rule must attach the following statement to any information submitted to EPA in response to this rule: "I hereby certify that, to the best of my knowledge and belief, all of the attached information is complete and accurate." This statement shall be signed and dated by the company's principal technical contact.

(g) *Recordkeeping.* Persons subject to the reporting requirements of this section must retain documentation of information contained in their reports for a period of 5 years from the date of the submission of the report.

(Approved by the Office of Management and Budget under control number 2070-0067)

[51 FR 17339, May 12, 1986; 51 FR 18323, May 19, 1986, as amended at 52 FR 20083, May 29, 1987]

§ 704.43 Chlorinated naphthalenes.

(a) *Definitions.* (1) "Extent of chlorination" means the percent by weight of chlorine.

(2) "Import" means to import in bulk form or as part of a mixture.

(3) "Isomeric ratio" means the relative amounts of each isomeric chlorinated naphthalene that composes the chemical substance; and for each isomer the relative amounts of each chlorinated naphthalene designated by the position of the chlorine atom(s) on the naphthalene.

(4) "Polychlorinated biphenyl" means any chemical substance that is limited to the biphenyl molecule and that has been chlorinated to varying degrees.

(5) "Small manufacturer" means a manufacturer (including importers) who meets either paragraph (a)(5)(i) or (ii) of this section:

(i) A manufacturer of a chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $40 million. However, if the annual production volume of a particular chemical substance at any individual site owned or controlled by the manufacturer is greater than 45,400 kiloms (100,000 pounds), the manufac- er shall not qualify as small for rposes of reporting on the produc- n of that chemical substance at it site, unless the manufacturer alifies as small under paragraph (5)(ii) of this section.

ii) A manufacturer of a chemical bstance is small if its total annual es, when combined with those of its rent company (if any), are less than million, regardless of the quantity the particular chemical substance oduced by that manufacturer.

iii) For imported mixtures contain- a chemical substance identified in ragraph (b) of this section, the 400 kilograms (100,000 pounds) ndard in paragraph (a)(5)(i) of this ction applies only to the amount of e chemical substance in a mixture d not the other components of the xture.

6) "Waste" means any solid liquid, misolid, or contained gaseous mate- l that results from the production a chemical substance identified in ragraph (b) of this section and ich is to be disposed.

b) *Substances for which reports ist be submitted.*

AS registry number	Chemical substance
90-13-1	Naphthalene, 1-chloro-
91-58-7	Naphthalene, 2-chloro-
21-64-8	Naphthalene, pentachloro-
21-65-9	Naphthalene, trichloro-
35-87-1	Naphthalene, hexachloro-
35-88-2	Naphthalene, tetrachloro-
25-30-5	Naphthalene, 1,5-dichloro-
25-31-6	Naphthalene, 1,4-dichloro-
50-69-3	Naphthalene, 1,2-dichloro-
50-72-8	Naphthalene, 1,6-dichloro-
50-73-9	Naphthalene, 1,7-dichloro-
50-74-0	Naphthalene, 1,8-dichloro-
50-75-1	Naphthalene, 2,3-dichloro-
65-70-5	Naphthalene, 2,6-dichloro-
98-75-6	Naphthalene, 1,3-dichloro-
98-77-8	Naphthalene, 2,7-dichloro-
34-13-1	Naphthalene, octachloro-
86-43-0	Naphthalene, chloro-
41-08-0	Naphthalene, heptachloro-
76-03-3	Naphthalene, chloro derivatives.

(c) *Persons who must report.* (1) Per- ns who are manufacturing or im- rting a chemical substance identi- ed in paragraph (b) of this section on tober 8, 1984.

(2) Persons who propose to import a emical substance identified in paragraph (b) of this section on or after October 8, 1984.

(3) Persons who manufacture a chemical substance identified in paragraph (b) of this section after October 8, 1984.

(4) A person is required to report only once for each chemical substance identified in paragraph (b) of this section.

(d) *Persons exempt from reporting.* (1) Small manufacturers.

(2) Persons described in § 704.5.

(e) *What information to report.* Persons described in paragraph (c) of this section must notify EPA of current or prospective manufacture or import. The notice must include, to the extent that it is known to or reasonably ascertainable by the person making the report, the following information:

(1) Company name and address.

(2) Name, address, and telephone number of the principal technical contact.

(3) For chemical substances proposed to be imported, the proposed date of import.

(4) A description of the use(s) or intended use(s) for the chemical substance.

(5) A description of the isomeric ratio and extent of chlorination of the chemical substance and the impurity level of polychlorinated biphenyls.

(6) The quantity (by weight) manufactured or imported within 12 months prior to October 8, 1984, if any, and the estimated quantity (by weight) to be manufactured or imported for the first 3 years following the date of the report or the date of the intended start of import whichever occurs later.

(7) The number of persons exposed to the chemical substance during manufacture, import, processing, distribution in commerce, use, and disposal.

(8) If a manufacturer's waste contains one or more of the chemical substances identified in paragraph (b) of this section, the manufacturer must:

(i) Provide the quantity (by weight) of the chemical substances identified in paragraph (b) of this section present in the waste.

(ii) Identify the constituents of the waste and their concentrations.

(iii) State the rate of waste generation as a percentage of production volume,

(iv) Describe where in the manufacturing process the waste is generated, and

(v) Describe the method for disposal of the waste.

(f) *When to report.* (1) Persons who are manufacturing or importing a chemical substance identified in paragraph (b) of this section on October 8, 1984 must notify EPA by November 6, 1984.

(2) Persons who propose to import a chemical substance identified in paragraph (b) of this section on or after October 8, 1984 must notify EPA by November 6, 1984, or 15 days after making the management decision described in § 704.3, whichever is later in time.

(3) Persons who manufacture a chemical substance identified in paragraph (b) of this section after October 8, 1984 must notify EPA within 30 days after the initial date of manufacture.

[49 FR 33653, Aug. 24, 1984; 49 FR 45133, Nov. 15, 1984; 50 FR 1215, Jan. 10, 1985; 51 FR 19839, June 3, 1986; 52 FR 20083, May 29, 1987. Redesignated at 53 FR 51717, Dec. 22, 1988]

§ 704.45 Chlorinated terphenyl.

(a) *Definitions.* (1) "Chlorinated terphenyl" means a chemical substance, CAS No. 61788-33-6, comprised of chlorinated ortho-, meta-, and paraterphenyl.

(2) "Extent of chlorination" means the percent by weight of chlorine for each isomer (ortho, meta, and para).

(3) "Isomeric ratio" means the ratios of ortho-, meta-, and parachlorinated terphenyls.

(4) "Polychlorinated biphenyl" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees.

(5) "Small manufacturer" means a manufacturer (importers are defined as manufacturers under TSCA) who meets either of the following standards under this rule:

(i) *First standard.* A manufacturer of an existing chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $40 million. However, if the annual production volume of a particular chemical substance at any individual site owned or controlled by the manufacturer is greater than 45,400 kilograms (100,000 pounds), the manufacturer shall not qualify as small for purposes of reporting on the production of that chemical substance at the site, unless the manufacturer qualified as small under paragraph (a)(5)(ii) of this section.

(ii) *Second standard.* A manufacturer of an existing chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of chemicals produced by that manufacturer.

(b) *Persons who must report.* Except for small manufacturers and as provided in § 704.5, the following persons are subject to the rule:

(1) Persons who manufacture or propose to manufacture chlorinated terphenyl.

(2) Persons who import (importers) or propose to import chlorinated terphenyl as a chemical substance in bulk or as part of a mixture.

(c) *What information to report.* Persons subject to this rule as described in paragraph (b) of this section must notify EPA of current or proposed manufacture or import of chlorinated terphenyl. The notice must include, to the extent that it is known to the person making the report or is reasonably ascertainable, the following information:

(1) Company name and address.

(2) Name, address, and telephone number of principal technical contact.

(3) A description of the use(s) or intended use(s) for chlorinated terphenyl.

(4) A description of the isomeric ratio and extent of chlorination of the chlorinated terphenyl and the impurity level of polychlorinated biphenyls.

(5) The quantity (by weight) manufactured or imported within 12 months prior to the effective date of the rule, if any, and the estimated quantity (by weight) to be manufactured or imported for the first three

years following the date of the report or the date of the intended start of production, whichever occurs later.

(6) The proposed date for the initiation of manufacturing or importation of chlorinated terphenyl, if appropriate.

(d) *When to report.* Persons who are manufacturing or importing chlorinated terphenyl on the effective date of the rule must notify EPA within 30 days of the effective date of the rule. Persons who propose to manufacture or import chlorinated terphenyl must notify EPA within 15 days after making the management decision described in § 704.3 "Proposed to manufacture or import".

(Approved by the Office of Management and Budget under control number 2070-0035)

[49 FR 11184, Mar. 26, 1984, as amended at 49 FR 32068, Aug. 10, 1984; 50 FR 2048, Jan. 15, 1985; 52 FR 20083, May 29, 1987. Redesignated at 53 FR 51717, Dec. 22, 1988]

§ 704.95 Phosphonic acid, [1,2-ethanediylbis[nitrilobis-(methylene)]]tetrakis- (EDTMPA) and its salts.

(a) *Substances for which reporting is required.* The chemical substances for which reporting is required under this section are:

CAS No.	Chemical name
1429-50-1	Phosphonic acid, [1,2-ethanediyl-bis[nitrilobis (methylene)]] tetrakis- (EDTMPA)
15142-96-8	Phosphonic acid, [1,2-ethanediyl-bis[nitrilobis(methylene)]] tetrakis-, hexasodium salt
34274-30-1	Phosphonic acid, [1,2-ethanediyl-bis[nitrilobis(methylene)]] tetrakis-, potassium salt
57011-27-5	Phosphonic acid, [1,2-ethanediyl-bis[nitrilobis (methylene)]] tetrakis-, ammonium salt
67924-23-6	Cobaltate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis-[phosphonato]] (8-)]-, pentapotassium hydrogen, (OC-6-21)-
67969-67-9	Cobaltate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (8-)-N,N',O,O'',O'''',O'''''']-, pentasodium hydrogen, (OC-6-21)-
67989-89-3	Cuprate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (8-)]-, pentapotassium hydrogen, (OC-6-21)-
68025-39-6	Cobaltate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (6-)-N,N',O,O'',O'''',O'''''']-, pentaammonium hydrogen, (OC-6-21)-
68188-96-5	Phosphonic acid, [1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis-, tetrapotassium salt
68309-98-8	Cadmate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (8-)]-, pentapotassium hydrogen, (OC-6-21)-
68901-17-7	Phosphonic acid, [1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis-, octaammonium salt
68958-86-1	Nickelate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (8-)]-, pentaammonium hydrogen, (OC-6-21)-
68958-87-2	Nickelate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis- [phosphonato]] (8-)]-, pentapotassium hydrogen, (OC-6-21)-
68958-88-3	Nickelate (6-), [[[1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis [phosphonato]] (8-)]-, pentasodium hydrogen, (OC-6-21)-

(b) *Persons who must report.* Unless exempt as provided in § 704.5, reports must be submitted by:

(1) Persons who manufacture or import any of the substances identified in paragraph (a) of this section.

(2) Persons who propose to manufacture or propose to import any of the substances identified in paragraph (a) of this section. For the purposes of importer reporting under this section, an import site is the operating unit within the person's organization which is directly responsible for importing the substance and which controls the import transaction; the import site may in some cases be the organization's headquarters office in the United States.

(c) *What information to report.* Persons identified in paragraph (b) of this section must report to EPA, for each of the substances identified in paragraph (a) of this section, the following information to the extent known to or reasonably ascertainable by them.

(1) Initial Report:

(i) Name and Chemical Abstracts Service Registry Number of the substance for which the report is submitted.

(ii) Company name and headquarters address.

(iii) Name, address, and telephone number of the principal technical contact.

(iv) The total quantity (by weight in pounds) of the substance manufactured or imported for the person's most recently completed corporate fiscal year.

(v) A description of the commercial uses of the substance during the person's most recently completed corporate fiscal year, including the production volume for each use.

(vi) The estimated quantity (by weight in pounds) of the substance proposed to be manufactured or imported in the person's current corporate fiscal year.

(vii) A description of the intended commercial uses of the substance during the person's current corporate fiscal year, including the estimated production volume for each use.

(2) Follow-up Report:

(i) Name and Chemical Abstracts Service Registry Number of the substance for which the report is submitted.

(ii) Company name and headquarters address.

(iii) Name, address, and telephone number of the principal technical contact.

(iv) The estimated quantity (by weight in pounds) of the substance proposed to be manufactured or imported in the person's current corporate fiscal year.

(v) A description of the intended commercial uses of the substance during the person's current corporate fiscal year, including the estimated production volume for each use.

(d) *When to report.* (1) Persons specified in paragraph (b)(1) of this section who are manufacturing or importing the substance as of December 5, 1988 must submit an initial report described in paragraph (c)(1) of this section by January 3, 1989.

(2) Persons specified in paragraph (b)(2) of this section must submit an initial report within 30 days after making the management decision described in § 704.3 or by January 3, 1989, whichever is later.

(3) Persons specified in paragraph (b) of this section, who submitted a report described in paragraph (c)(1) of this section, must submit a follow-up report described in paragraph (c)(2) of this section within 30 days of making the management decision, described at § 704.3, to do either of the following events:

(i) Manufacture or import the substance in a quantity 50 percent greater than the quantity reported in the most recently submitted report.

(ii) Manufacture or import the substance for a use not reported for that substance in any previous report.

(e) *Certification.* Persons subject to this section must attach the following statement to any information submitted to EPA in response to this section: "I hereby certify that, to the best of my knowledge and belief, all of the attached information is complete and accurate." This statement must be signed and dated by the company's principal technical contact.

(f) *Recordkeeping.* Persons subject to the reporting requirements of this section must retain documentation of information contained in their reports for a period of 5 years from the date of the submission of the report.

(Approved by the Office of Management and Budget under Control Number 2070-0067)

[53 FR 41337, Oct. 21, 1988]

§ 704.102 Hexachloronorbornadiene.

(a) *Definitions.* (1) "Endrin" means the pesticide 2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1a*alpha*, 2*beta*, 2a*beta*, 3*alpha*, 6*alpha*, 6a*beta*, 7*beta*, 7a*alpha*)-, CAS Number 72-20-8.

(2) "HEX-BCH" means the chemical substance 1,2,3,4,7,7-hexachloronorbornadiene, CAS Number 3389-71-7.

(3) "Isodrin" means the pesticide 1,4:5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexacholoro-1,4,4a,5,8,8a-hexahydro-, (1*alpha*, 4*alpha*, 4a*beta*, 5*beta*, 8*beta*, 8a*beta*)-, CAS Number 465-73-6.

(4) "Small business" means any manufacturer, importer, or processor who meets either paragraph (a)(4)(i) or (ii) of this section:

(i) A business is small if its total annual sales, when combined with those of its parent (if any), are less than $40 million. However, if the annual manufacture, importation, or processing volume of a particular chemical substance at any individual site owned or controlled by the business is greater than 45,400 kilograms (100,000 pounds), the business shall not qualify as small for purposes of reporting on the manufacture, importation, or processing of that chemical substance at that site, unless the business qualifies as small under paragraph (a)(4)(ii) of this section.

(ii) A business is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of the particular chemical substance manufactured, imported, or processed by that business.

(iii) For imported and processed mixtures containing HEX-BCH, the 45,400 kilograms (100,000 pounds) standard in paragraph (a)(4)(i) of this section applies only to the amount of HEX-BCH in a mixture and not the other components of the mixture.

(5) "8-hour time weighted average" means the cumulative exposure for an 8-hour work shift computed as follows:

$$E = \frac{C_aT_a + C_bT_b + \ . \ . \ . \ C_nT_n}{8}$$

Where:

E is the equivalent exposure for the working shift.

C_i is the concentration (i.e., parts per million) during any period of time (T_i) where the concentration remains constant.

T_i is the duration in hours of the exposure at the concentration C_i.

(6) "Year" means corporate fiscal year.

(b) *Persons who must report.* (1) Reports must be submitted by:

(i) Persons who are manufacturing, importing, or processing HEX-BCH for use as an intermediate in the production or isodrin or endrin on or after January 2, 1986; and

(ii) Persons who propose to manufacture, import, or process HEX-BCH for use as an intermediate in the production of isodrin or endrin, on or after January 2, 1986.

(2) Persons described in paragraph (b)(1) of this section who engage or propose to engage in more than one activity (i.e., manufacture and processing) must report the information required in paragraph (d) separately for each activity.

(c) *Persons exempt from reporting.* (1) Small businesses.

(2) Persons described in § 704.5(a) and (c).

(d) *Information to report.* (1) Initial reports must include, to the extent that it is known to or reasonably ascertainable by the person reporting, the following information:

(i) Company name and address.

(ii) Name, address, and telephone number of the principal contact.

(iii) Name and address of plant sites where HEX-BCH is or is proposed to be manufactured, imported, or processed, noting for each plant site which activity takes or would take place at each site.

(iv) If applicable, the intended date for initiating the manufacture, import, or processing of HEX-BCH.

(v) If applicable, the actual quantity (by weight) of HEX-BCH manufactured, imported, or processed during the most recently concluded year.

(vi) The estimated quantity (by weight) of HEX-BCH to be manufactured, imported, or processed each year during the first 3 years following the date of the report or the date of the intended start of manufacture, import, or processing, whichever occurs later.

(vii) For each year described in paragraphs (d)(1) (v) and (vi) of this section: the number or expected number of employees exposed to HEX-BCH during the manufacture, import, processing, distribution in commerce, use, and disposal; the routes of exposure; and the 8-hour time weighted average of exposure.

(viii) If employees are exposed or expected to be exposed to HEX-BCH, state for each reported route of exposure, whether personal protective equipment is used or expected to be used, and a description of the personal protective equipment.

(ix) The actual or anticipated quantity, content, method of disposal, and disposal site of any wastes generated or expected to be generated during the manufacture, importation, or processing of HEX-BCH.

(2) Subsequent reports must provide, to the extent known to or reasonably ascertainable by the person reporting, the information in paragraph (d)(1) of this section and a statement explaining why the subsequent report is required.

(e) *When to report.* (1) Persons who are manufacturing, importing, or processing HEX-BCH on January 2, 1986, must submit an initial report to EPA by February 3, 1986.

(2) Persons who propose to manufacture, import, or process HEX-BCH on or after January 2, 1986, must submit an initial report to EPA by February 3, 1986, or 30 days after making the management decision described in § 704.3 "Propose to manufacture, import, or process," whichever is later in time.

(3) Persons described in paragraph (b) of this section, who have submitted a report described in paragraph (d) of this section, must submit a subsequent report within 30 days of any of the following events. Based on the most recently submitted report:

(i) The manufacture, importation, or processing of HEX-BCH begins at a plant site different than that reported pursuant to paragraph (d)(1)(iii) of this section.

(ii) The actual quantity (by weight) of HEX-BCH manufactured, imported, or processed in a given year is greater than or equal to 200 percent of the estimated value for that year reported pursuant to paragraph (d)(1)(vi) of this section.

(iii) The total number of employees exposed to HEX-BCH is greater than 130 percent of the projected value reported pursuant to paragraph (d)(1)(vii) of this section.

(iv) The route of exposures to HEX-BCH differs from that reported pursuant to paragraph (d)(1)(vii) of this section.

(v) The actual 8-hour time weighted average exposure for any activity exceeds the projection reported pursuant to paragraph (d)(1)(vii) of this section by more than 100 percent.

(vi) The method of disposal or disposal site reported pursuant to paragraph (d)(1)(ix) of this section has changed.

(vii) Three years have passed since the most recent submission of a report and the person is still engaged in the manufacture, importation, or processing of HEX-BCH.

(f) *Certification of review.* Each person who submits a report under this section must for 3 years following the submission date of the most recent submission, review their activities at the end of each year to determine
whether any reportable event spec
fied in paragraph (e)(3) of this sectio
has occurred. If a review shows tha
none of these events has occurred, th
person is required to certify this fac
in writing.

(g) *Recordkeeping.* Any person su
ject to the reporting requirements
this section must:

(1) Retain documentation of info
mation contained in their report
This documentation must be mai
tained for a period of 3 years from th
date of the submission of the repor
and

(2) Retain the certification require
by paragraph (f) of this section for
years from the date of its creation.

(Approved by the Office of Manageme
and Budget under control number 207
0067)

[50 FR 47536, Nov. 19, 1985, as amended
52 FR 20083, May 29, 1987. Redesignated
53 FR 51717, Dec. 22, 1988]

§ 704.104 Hexafluoropropylene oxide.

(a) *Definitions.* (1) "HFPO" mea
the chemical substance hexafluoropr
pylene oxide, CAS Number 428-59-
[Listed in TSCA Inventory as oxiran
trifluoro(trifluoromethyl)-]

(2) "Enclosed process" means a pro
ess that is designed and operated
that there is no intentional release
any substance present in the proces
A process with fugitive, inadvertent,
emergency pressure relief releases r
mains an enclosed process so long
measures are taken to prevent work
exposure to and environmental co
tamination from the releases.

(3) "Small processor" means a pro
essor that meets either the standa
in paragraph (a)(3)(i) of this section
the standard in paragraph (a)(3)(ii)
this section.

(i) *First standard.* A processor of
chemical substance is small if its tot
annual sales, when combined wi
those of its parent company, if an
are less than $40 million. However,
the annual processing volume of a pa
ticular chemical substance at any ind
vidual site owned or controlled by th
processor is greater than 45,400 kil
grams (100,000 pounds), the process
shall not qualify as small for purpos
of reporting on the processing of th

chemical substance at that site, unless the processor qualifies as small under paragraph (a)(3)(ii) of this section.

(ii) *Second standard.* A processor of a chemical substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of the particular chemical substance processed by that company.

(iii) *Inflation index.* EPA will use the Inflation Index described in the definition of "small manufacturer" that is set forth in § 704.3 for purposes of adjusting the total annual sales values of this small processor definition. EPA will provide FEDERAL REGISTER notification when changing the total annual sales values of this definition.

(b) *Persons who must report.* Except as provided in paragraph (c) of this section, the following persons are subject to this section:

(1) Persons who manufacture or propose to manufacture HFPO for use as an intermediate in the manufacture of fluorinated substances in an enclosed process.

(2) Persons who import or propose to import HFPO for use as an intermediate in the manufacture of fluorinated substances in an enclosed process.

(3) Persons who process or propose to process HFPO as an intermediate in the manufacture of fluorinated substances in an enclosed process.

(c) *Persons not subject to this rule.* The following persons are not subject to this rule:

(1) Small processors.

(2) Persons described in § 704.5 (a) through (d).

(3) Persons who have already submitted to EPA a completed copy of the Preliminary Assessment Information Manufacturer's Report (EPA Form 7710-35, as described at § 712.28 of this chapter) for HFPO, as required by § 712.30(d) of this chapter are not required to report under this section with respect to activities previously reported on.

(d) *What information to report.* Persons identified in paragraph (b) of this section must submit a Premanufacture Notice form (EPA Form 7710-25) as described in Part 720, Appendix A, of this chapter.

(e) *When to report.* (1) Persons who are manufacturing, importing, or processing, or who propose to manufacture, import, or process HFPO for use as an intermediate in the manufacture of fluorinated substances in an enclosed process as of December 10, 1987, must report by February 8, 1988.

(2) Persons who propose to manufacture, import, or process HFPO for use as an intermediate in the manufacture of fluorinated substances in an enclosed process after December 10, 1987, must report within 30 days after making a firm management decision to commit financial resources for the manufacturing, importing, or processing of HFPO.

(f) *Recordkeeping.* Persons subject to the reporting requirements of this section must retain documentation of information contained in their reports for a period of 5 years from the date of submission of the reports.

(g) *Where to send reports.* Reports must be submitted by certified mail to: Document Processing Center (TS-793), Office of Toxic Substances, Environmental Protection Agency, Room L-100, 401 M Street, SW., Washington, DC 20460. ATTN: HFPO Reporting.

(Approved by the Office of Management and Budget under control number 2070-0067)

[52 FR 41299, Oct. 27, 1987]

§ 704.175 4,4′-methylenebis(2-chloroaniline) (MBOCA).

(a) *Substance subject to reporting.* The chemical substance 4,4′-methylenebis(2-chloroaniline) (CAS No 101-14-4) is subject to reporting under this section. The substance also is identified as 4,4′-methylenebis(2-chlorobenzenamine) and MBOCA.

(b) *Persons who must report.* Except as provided in paragraph (c) of this section, the following persons are subject to this rule.

(1) Persons who propose to manufacture MBOCA in the United States on or after June 2, 1986.

(2) Persons who are manufacturing MBOCA in the United States as of June 2, 1986.

(3) Persons manufacturing MBOCA in the United States on or after June 2, 1986 who propose to change their manner or method of manufacturing the substance from a manner or method of manufacturing that previously was reported under this section.

(c) *Persons not subject to this rule.* The following persons are exempt from the reporting requirements of this section:

(1) Persons who import MBOCA into the customs territory of the United States and do not otherwise manufacture the substance in the United States.

(2) Persons who complied with the requirements of this section prior to June 2, 1986 and received written notification of compliance from EPA.

(d) *What information to report.* Persons who are subject to this rule as described in paragraph (b) of this section must report information to EPA by completing the following Parts of the notice form contained in Appendix A to Part 720 of this chapter: Parts I.A., I.B., I.C.1., I.C.3., and II.A.; also, Part III as appropriate. Persons subject to the requirements of this section also must submit a narrative description of any processing and packaging of MBOCA that occurs at the manufacturing plant site, including the number of workers potentially exposed to MBOCA during on-site processing and packaging of MBOCA and a description of any personal protective equipment and/or engineering controls that would be used to prevent release of and exposure to MBOCA during on-site processing and packaging. Persons subject to the requirements of this section are not required to submit information on processing or use of MBOCA away from the manufacturing plant site. Respondents to this rule shall report all information that is known to or reasonably ascertainable by the person reporting.

(e) *When to report.* (1) Persons specified in paragraph (b)(1) of this section must report by July 2, 1986 or within 30 days after making a firm management decision to commit financial resources for the manufacture of MBOCA, whichever is later in time.

(2) Persons specified in paragraph (b)(2) of this section must report by July 2, 1986.

(3) Persons specified in paragraph (b)(3) of this section must report within 30 days of making a firm management decision to commit financial resources to change their manner or method of manufacturing the substance from a manner or method of manufacturing that previously was reported under this section.

(Approved by the Office of Management and Budget under control number 2070-0067)

[51 FR 13223, Apr. 18, 1986, as amended at 52 FR 20083, May 29, 1987]

Subpart C—CAIR: Comprehensive Assessment Information Rule—General Reporting and Recordkeeping Provisions

SOURCE: 53 FR 51717, Dec. 22, 1989, unless otherwise noted.

§ 704.200 Overview of CAIR provisions—Subparts C and D.

Although the provisions in Subpart A of this Part apply to all of Part 704, EPA may in Subpart C and D of this Part modify the Subpart A provisions of this Part for the purposes of requiring reporting and recordkeeping provisions on specified substances. In the event of a conflict between the provisions of Subparts A and C of this Part, the provisions of Subpart C of this Part shall govern. Subpart C of this Part explains the reporting and recordkeeping provisions for persons who manufacture, import, or process the substances identified in Subpart D of this Part. Subpart D of this Part identifies: the substances for which EPA requires the reporting of information under CAIR; the persons who are required to submit the information; the questions from the CAIR reporting form that must be answered; the time period on which to report; and the effective date of the final rule. The text of Subpart D of this Part is set out in a matrix format and uses symbols to identify some reporting requirements. These symbols are explained in § 704.206. In addition to the matrix, Subpart D also identifies when all reporting forms must be submitted.

§ 704.203 Definitions.

All definitions as set forth in section 3 of TSCA and § 704.3 apply in this Subpart. In addition, the following definitions are provided for the purposes of this Subpart.

"Coverage period" means a time-span which is 1 day less than 2 years, as identified in Subpart D, and is the time-span which a person uses to determine his/her reporting year. Subject manufacturing or processing activities may or may not have occurred during the coverage period.

"Manufacturing activities" means all those activities at one site which are necessary to produce a substance identified in Subpart D of this Part and make it ready for sale or use as the listed substance, including purifying or importing the substance.

"Processing activities" means all those activities which include (1) preparation of a substance identified in Subpart D of this Part after its manufacture to make another substance for sale or use, (2) repackaging of the identified substance, or (3) purchasing and preparing the identified substance for use or distribution in commerce.

"Repackager" means a person who buys a substance identified in Subpart D of this Part or mixture, removes the substance or mixture from the container in which it was bought, and transfers this substance, as is, to another container for sale.

"Reporting Period" means the time period during which CAIR reporting forms are to be submitted to EPA.

"Reporting Year" means the most recent complete corporate fiscal year during which a person manufactures, imports, or processes the listed substance, and which falls within a coverage period identified with a substance in Subpart D of this Part.

"Small processor" means a processor that meets either of the following standards:

(1) *First Standard.* A processor of a substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $40 million. However, if the annual processing volume of a particular substance at any individual site owned or controlled by the processor is greater than 45,400 kilograms (100,000 pounds), the processor shall not qualify as small for purposes of reporting on that substance at that site, unless the processor qualifies as small under standard (2) of this definition.

(2) *Second standard.* A processor of a substance is small if its total annual sales, when combined with those of its parent company (if any), are less than $4 million, regardless of the quantity of substances processed by that processor.

(3) *Inflation index.* EPA shall make use of the Producer Price Index for Chemicals and Allied Products, as compiled by the U.S. Bureau of Labor Statistics, for purposes of determining the need to adjust the total annual sales values and for determining new sales when adjustments are made. EPA may adjust the total annual sales values whenever the Agency deems it necessary to do so, provided that the Producer Price Index for Chemicals and Allied Products has changed more than 20 percent since either the most recent previous change in sales values or the date of promulgation of this rule, whichever is later. EPA shall provide FEDERAL REGISTER notification when changing the total annual sales values.

§ 704.205 Limitations on reporting requirements.

The following limitations apply to the reporting and recordkeeping requirements of Subpart D of this Part.

(a) *Report on TSCA-regulable quantities.* A person must report on only the quantity of a substance that is defined as a chemical substance under TSCA section 3(2).

(b) *Chemical substances from natural sources.* A manufacturer of a chemical substance which is mined or extracted from minerals, ores, petroleum, natural gas, quarried nonmetallic minerals (including extraction of salts from seawater or brines), coal, or atmospheric gases, or from any other natural source, must report only about the manufacturing steps taken, and the uses of, that substance, and not about production of the natural source material or other crude precursors derived from the natural source material.

§ 704.206 Persons who must report.

(a) *General requirements.* Manufacturers, importers, and processors must report on each substance identified in Subpart D of this Part if: they are designated in Subpart D as a person who must report on the substance, they manufactured, imported, or processed the substance during the coverage period designated in Subpart D for which reporting on that substance is required, and they are not otherwise exempt.

(b) *Symbols for designating persons who must report.* EPA will designate who must report on each substance identified in Subpart D of this Part by using the following symbols:

(1) "M" means each person who manufactured the substance for commercial purposes.

(2) "I" means each person who imported the substance for commercial purposes.

(3) "P" means each person who processed the substance for commercial purposes.

(4) "X/P" means each person who manufactured, imported, or processed the substance for commercial purposes and distributed the substance under a trade name.

(c) *Special provision for importers.* When two or more persons are involved in a particular import transaction of a substance identified in Subpart D of this Part, and two or more of these persons meet the definition of "importer" for this transaction, they may determine among themselves who should comply with the CAIR reporting and recordkeeping requirements for the substance and have that person list the names of the other importers who were involved in the transaction. If none of the persons involved comply with the CAIR reporting and recordkeeping requirements for that substance, then EPA will hold each of these persons liable for their failure to comply.

(d) *Dual designations.* If a person is engaged in more than one activity (e.g., manufacturing and processing) at the same site for a substance identified in Subpart D of this Part and both activities are listed, then that person must comply with the reporting requirements for both activities.

§ 704.207 Information to be reported.

(a) The CAIR reporting form is comprised of 10 sections. Each section contains specific questions which pertain to the subject matter found in that particular section. There is a set of instructions which accompanies the CAIR reporting form. The instructions consist of: specific directions and sample answers relating to certain form questions based on two reporting scenarios, conversion tables, and a glossary which defines key terms. The following is a description of the information contained in each section of the CAIR reporting form.

(1) Section 1: *General Manufacturer, Importer, and Processor Information.*

Respondent Identification
Reporting Status
Certification Statements
Corporate Data
Mixture Identification

(2) Section 2: *Manufacturer, Importer, and Processor Volume, and Use.*

Respondent Activities
Quantity Manufactured, Imported, and Processed
Quantity Exported
Quantity Stored on-site
Product Types
Transportation off-site
Customer Use

(3) Section 3: *Processor Raw Material Identification.*

Quantity Used and Price of Listed Substance
Transportation to Site
Listed Substance in the Form of a Mixture

(4) Section 4: *Physical/Chemical Properties.*

Purity of Listed Substance
MSDS Exists/Submitted
Physical State of Listed Substance
Particle Size of Listed Substance
Fire, Explosion, and Other Hazard Data
Shipment Restrictions

(5) Section 5: *Environmental Fate.*

Rate Constants and Transformation Products
Partition Coefficients

(6) Section 6: *Economic and Financial Information.*

Company Type
Product Types/Product Markets
Commercially Available Substitutes
Production Costs
Product Sales

(7) Section 7: *Manufacture and Process Information.*

Process Block Flow Diagrams
Unit Operation Equipment Types
Process Stream Description and Characterization

(8) Section 8: *Residual Treatment, Generation, Characterization, Transportation, and Management.*

Residual Treatment Block Flow Diagrams
Unit Operation Equipment Types
Process Stream Description and Characterization
Residual Management Methods
Residual Handling Instructions/Restrictions
Storage or Treatment in Tanks and Waste Piles
Storage, Treatment, or Disposal in Containers
Residual Handling
Burning in Boilers and Incinerators
Storage, Treatment, or Disposal in Land Treatment Sites and Surface Impoundments
Disposal in Landfill Cells and Injection Wells

(9) Section 9: *Worker Exposure.*

Employment and Potential Exposure Profile
Records Maintained for Workers
Job Titles by Labor Category
Exposure Characterization
Process Block Flow Diagram with Associated Work Areas
Description of Work Areas and Worker Activities
Work Place Monitoring Programs
Personal/Ambient Air Monitoring
Medical, Monitoring Tests
Engineering Controls
Equipment/Process Modifications
Personal Protective Clothing and Safety Equipment
Respirator Maintenance Activity and Training Programs
Work Practices
Housekeeping Tasks
Medical, Leak, Spill, Worker Safety, and Health Plans

(10) Section 10: *Environmental Release.*

Plant Location
Meteorological Conditions
Groundwater Below Plant Site
Routine Releases
Quantity of Listed Substance Released
Control Technologies
Point Source Emissions
Emission Characteristics
Equipment Leaks and Detection
Pressure Relief Devices with Controls
Raw Material, Intermediate, and Product Storage Emissions
NPDES, POTW, and Non-point Discharges
Releases to Soils, Groundwater, and Drinking Water
Spills and Other Non-routine Releases
Weather Conditions, Date and Time of Release
Method of Release and Quantity Released
Cause and Result of Release
Authorities and Population Notified
Personal Injuries and Casualties
Release Prevention Practices
Repairs and/or Preventative Measures

(b) [Reserved]

§ 704.208 Distribution of substances under a trade name.

(a) The X/P designation requires each person who manufactured, imported, or processed a substance identified in Subpart D of this Part for commercial purposes and who distributed the substance under a trade name to do one of the following.

(1) *Trade name list.* Submit to EPA a list of all trade names under which the person distributes the substance. Submissions must have a postmark date no later than 1 day after the effective date of the final rule listing the substance in Subpart D of this Part. Trade name lists must be submitted by certified mail to: TSCA Document Processing Center (TS-790), Office of Toxic Substances, Environmental Protection Agency, Room L-100, 401 M St., SW., Washington, DC 20460, ATTENTION: CAIR Trade Name List. Include the date of the FEDERAL REGISTER notice you are subject to, the sub-

stance name, CAS number, trade name(s) associated with that substance, the company's name, address and telephone number, and the address and telephone number of a technical contact. EPA will issue all submitted trade names in a FEDERAL REGISTER notice in order to notify all processors of these trade name substances of their CAIR reporting and recordkeeping obligations.

(2) *Customer reporting.* Submit to EPA a CAIR reporting form that answers the processor's reporting requirements for each customer who would be required to report if the customer knew it was processing the listed substance. Persons may only choose to report for their customers if such persons can supply all of the information requested. Persons reporting on their customers' activities are liable for information reported incorrectly just as they are for reporting incorrectly on their own activities. Reporting is due no later than 90 days after the effective date of the final rule listing the substance in Subpart D of this Part.

(3) *Customer notification.* Notify each customer who would be required to report if the customer knew they were processing the listed substance, of the specific section in Subpart D of this Part which identifies the substance and the processor reporting requirements. The customer notification must be sent by certified mail, return receipt requested, within 30 days of the effective date of the final rule that added the substance to Subpart D of this Part. The notification must specify which questions from the form must be answered, on which trade name substances, when the reports are due, the citation and date of the final rule that added the substance to Subpart D, and where to send the reports. Customers must report within the time period indicated in § 704.223(b).

(b) *Notification extensions.* Any person who chooses to notify their customers of their reporting obligations, but cannot meet the notification deadline, may apply for a reasonable extension of time. Requests for extensions must be made in writing, contain a justification for such a request, and be addressed to: TSCA Document Processing Center (TS-790), Office of Toxic Substances, U.S. Environmental Protection Agency, Room L-100, 401 M St., SW., Washington, DC 20460, ATTENTION: CAIR customer notification extension. Extension requests must be postmarked no later than 5 days before the notification deadline.

(c) [Reserved]

§ 704.210 Exemptions.

The reporting exemptions set out in § 704.5 apply to CAIR reporting requirements. This section contains additional exemptions from reporting that also apply to CAIR reporting requirements. EPA may modify exemptions for CAIR reporting requirements for specific substances by specifying the modification in Subpart D of this Part.

(a) *Repackager.* A person who is solely a repackager as defined in § 704.203, and does not engage in any other processing activities, is exempt from the reporting and recordkeeping requirements of this Subpart.

(b) *Small processor.* A person who qualifies as a small processor as this term is defined in § 704.203 is exempt from the reporting and recordkeeping requirements of this Subpart.

(c) *Previous submission of data.* (1) A submitter who previously provided information on a substance identified in Subpart D of this Part to EPA or another Federal agency on a CAIR reporting form qualifies for a partial exemption from current reporting requirements for that substance and site if the person previously reported voluntarily or pursuant to previous reporting and recordkeeping requirements of this Subpart. The previously submitted report must have covered a complete corporate fiscal year that ended no more than 3 years before the effective date of the current reporting requirements for the substance, and the data on the previously submitted CAIR form must be current, accurate, and complete for the reporting year determined using the coverage periods specified in Subpart D of this Part.

(2) If the submitter qualifies for this partial exemption because the submitter previously submitted information voluntarily to EPA or another agency,

en that person may, in response to a ecified reporting requirement on a ostance identified in Subpart D of s Part, submit only a completed ction 1 of the CAIR reporting form d a copy of the previous submission. use this partial exemption, the rson must sign the certification set t in Section 1 of the CAIR reporting rm that pertains to the use of this emption.

3) If the submitter qualifies for this rtial exemption because the submit- r previously submitted information EPA pursuant to reporting require- ents of this Subpart, then that rson may, in response to a specified porting requirement on a substance entified in Subpart D of this Part, bmit only a completed Section 1 of e CAIR reporting form and indicate e date of and the technical contact r the previous submission. To use is partial exemption, the person ust sign the certification set out in ction 1 of the CAIR reporting form at pertains to the use of this exemp- on.

704.212 Questions selected.

(a) *Designated questions.* Each erson who is required to report on a ıbstance identified in Subpart D of is Part must answer only the CAIR eporting form questions designated in ubpart D. A CAIR reporting form nd instructions can be obtained from ne TSCA Assistance Office as out- ned in § 704.216.

(b) *Specifying the questions.* (1) The uestions selected will always include ection 1 of the CAIR reporting form.

(2) Other questions selected will be pecified by section or question umber (e.g., 3 all or 3.01 and 3.02).

(i) Whenever the questions selected pecify a section of the CAIR report- ng form followed by the word "all," ach person who is required to report n the identified substance must nswer all parts of each question vithin the section.

(ii) Whenever the questions selected pecify a question from the CAIR re- orting form, each person who is re- uired to report on the identified sub- tance must answer all parts of the uestion.

(c) *One report per site.* Each person who is required to report on a substance identified in Subpart D of this Part must report the required information separately for each site at which that person manufactured, imported, or processed the substance.

(d) *Activities on which to report.* Each person who is required to report on a substance identified in Subpart D of this Part must report the required information for each activity which occurs at the site. If a person is engaged in more than one activity (e.g., manufacturing and processing) at the same site with respect to the substance, such person is only required to report on the activity or activities specified in Subpart D. If a person is required to report on more than one activity for the same substance, such person must report on all specified activities on the same form.

§ 704.214 Coverage period.

(a) Each person who is required to report on a substance identified in Subpart D of this Part must comply with the reporting requirement for the coverage period designated in the Subpart D matrix.

(b) EPA will specify for each reporting requirement the coverage period on which the information must be reported.

(c) Activities which occurred during a coverage period are reportable if they occurred during the reporting year.

(d) Persons who were engaged in reportable activities in more than one coverage period must report only on the most recent coverage period in which the activities occurred.

§ 704.215 Reporting period.

(a) *When reports are due.* (1) Persons who are required to report on a substance identified in Subpart D of this Part, including those who choose to report for their customers who process the identified substance, must submit their completed CAIR forms during the reporting period identified in § 704.223(a).

(2) Persons who were notified by a supplier that reporting is required on a trade name substance, must submit

their completed CAIR forms during the reporting period identified in § 704.223(b).

(b) *Reporting extensions.* Persons who cannot submit their reports by the deadline as specified in § 704.223 may apply for a reasonable extension of time. Requests for extensions must be made in writing, contain a justification for such requests, and be addressed to: TSCA Document Processing Center (TS-790), Office of Toxic Substances, U.S. Environmental Protection Agency, Room L-100, 401 M St., SW., Washington, DC 20460, ATTENTION: CAIR reporting extension. Extension requests must be postmarked no later than 30 days after the effective date of the addition of a substance or mixture to Subpart D of this Part or 30 days after notification by a supplier as described in § 704.208.

§ 704.216 How to obtain a CAIR reporting form.

CAIR forms and instructions may be obtained by telephoning or writing the TSCA Assistance Office. Phone Number: (202) 554-1404, TDD (202) 554-0551. Address: TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

§ 704.217 How to submit completed CAIR reporting forms.

(a) Each person who is required to report on a substance identified in Subpart D of this Part may submit their reports from the individual sites or through the company headquarters. However, a separate report must be submitted for each substance at each site at which the person engages in one or more of the activities for which EPA is requesting information.

(b) Submitters must send their completed forms to: TSCA Document Processing Center (TS-790), Office of Toxic Substances, U.S. Environmental Protection Agency, Rm. L-100, 401 M St., SW., Washington, DC 20460. ATTENTION: CAIR Reporting.

§ 704.219 Confidential business information claims.

(a) Submitters may assert a Confidential Business Information (CBI) claim for information submitted to EPA only if: the claim is asserted in accordance with this section; and release of the information would reveal trade secrets or confidential commercial or financial information, as provided in section 14(a) of TSCA. EPA will place all information not claimed as confidential in the manner described in this section in the public file without further notice to the respondent.

(b) Submitters who assert a CBI claim for submitted information must provide EPA with two copies of their submission. The first copy must be complete and contain all information being claimed as confidential. The second copy must contain only information not claimed as confidential. EPA will place the second copy of the submission in the public file. Failure to furnish a second copy of the submission when information is claimed as confidential in the first copy will be considered a presumptive waiver of the claim of confidentiality. EPA will notify the submitter by certified mail that a finding of a presumptive wavier of the claim of confidentiality has been made. The submitter has 30 days from the date of receipt of notification to submit the required second copy. Failure to submit the second copy will cause EPA to place the first copy in the public file.

(c) Submitters may assert CBI claims only at the time a completed CAIR form is submitted and only in the specified manner.

(1) Submitters must clearly mark all information claimed as confidential. Submitters can claim information submitted on a reporting form as confidential by placing in the CBI box, which is adjacent to the question, the letter or letters that indicate the category of the information, as enumerated in paragraph (e) of this section, which is being claimed confidential. Respondents who claim information submitted on continuation sheets to the form as confidential must do so by writing the word "Confidential" at the top of the page on which the information appears and by placing brackets ([ ]) around the information claimed confidential.

(2) [Reserved]

(d) Submitters must substantiate all
laims of confidentiality at the time
he submitter asserts the claim (i.e.,
vhen the reporting form is submit-
ed). Failure to provide substantiation
f a claim at the time the submitter
ubmits the reporting form will result
n a waiver of the confidentiality
laim, and the information may be dis-
losed to the public without further
otice to the submitter.

(e) EPA has identified six informa-
ion categories as those which will en-
ompass all claims of confidentiality:

Submitter identity=h,
Substance identity=i,
Volume manufactured, imported, or
 processed=j,
Jse information=k,
Process information=l, and
Other information=m.

Submitters who assert a CBI claim on
he reporting form must mark the
etter or letters (h through m) that
epresent the appropriate
ategory(ies) of confidentiality for the
nformation in the box adjacent to the
uestion. Confidentiality claims for in-
ormation on continuation sheets are
asserted by placing the appropriate
etter(s) in the margin by the informa-
ion claimed confidential.

(f) Submitters who assert any CBI
laims must substantiate all claims by
ompleting all applicable portions of
he CBI substantiation form found in
Appendix II of the CAIR reporting
orm.

Subpart D—CAIR Specific Reporting and Recordkeeping Requirements

SOURCE: 53 FR 51721, Dec. 22, 1988, unless
otherwise noted.

§ 704.220 Chemical substance matrix requirements.

For each substance listed in the matrix in § 704.225, EPA has identified the persons who must report on that substance by means of the symbols M, I, P, and X/P. An explanation of these symbols is given in § 704.206 of Subpart C of this Part. These designated persons must respond to all of the matrix's reporting requirements. All of the CAIR reporting and recordkeeping requirements are explained in Subpart C of this Part. Persons who are required to report must comply with Subpart C of this Part.

§ 704.223 Reporting period.

(a) Reports must be submitted to the Agency no latter than 90 days after the effective date of the final rule listing the substance in § 704.225, except as described in § 704.223(b).

(b) Persons subject to X/P designations and who chose to notify their customers, must inform their customers that reports are due within 90 days of receipt of notification.

§ 704.225 Chemical substance matrix by CAS registry number and trade name matrix in alphabetical order.

The following codes are used in this section.

M=Each Person who Manufactured the Substance for Commercial Purposes
I=Each Person who Imported the Substance for Commercial Purposes
P=Each Person who Processed the Substance for Commercial Purposes
X/P=Each Person who Manufactured, Imported, or Processed the Substance for Commercial Purposes and Distributed the Substance under a Trade Name

(a) List of Chemicals.

CAS No.	Chemical name	Who must report	Exemptions added (+) removed (−)	Coverage period	Questions selected	Effective date
57-56-7	Hydrazinecarboxamide	M, X/P, I, P		2/8/87-2/5/89	1, 2.08, 2.12, 2.13, 9.02, 9.03, 9.06	2/6/89
60-35-5	Acetamide (Ethanamide)	M, I		2/8/87-2/5/89	1, 2.01, 2.04 thru 2.06, 2.08, 2.12 thru 2.14, 2.17, 3.04, 9.04 thru 9.07	2/6/89
79-27-6	Ethane, 1,1,2,2-tetrabromo-	M, X/P, I, P		2/8/87-2/5/89	1, 2.08, 2.12, 2.13	2/6/89
85-01-8	Phenanthrene	M, X/P, I, P		2/8/87-2/5/89	1, 2.01, 2.03, 2.05 thru 2.08, 2.11 thru 2.14, 2.16, 2.17, 9.02, 10.05, 10.06	2/6/89
91-08-7	Benzene, 1,3-diisocyanato-2-methyl- (2,6-Toluene diisocyanate).	X/P, P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.08 thru. 10.16, 10.23	2/6/89
		M, I		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.05, 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.09 thru. 10.16, 10.23	2/6/89
93-00-5	2-Naphthalenesulfonic acid, 6-amino- (Broenner's acid).	M, I		2/8/87-2/5/89	1, 2.01, 2.04 thru 2.06, 2.08, 2.11, 2.12, 2.17, 3.04, 4.01, 9.07, 10.05, 10.06	2/6/89
101-14-4	Benzenamine, 4,4′-methylenebis[2-chloro- (MBOCA).	X/P, P		2/8/87-2/5/89	1, 9.01, 9.03, 9.06, 9.08, 9.12, 9.15	2/6/89
115-96-8	Ethanol, 2-chloro-, phosphate (3:1) (Tris(2-chloroethyl) phosphate).	M, I		2/8/87-2/5/89	1, 2.01, 2.03, 2.05 thru 2.08, 2.11 thru 2.14, 2.16, 2.17, 9.02, 10.05, 10.06	2/6/89
129-00-0	Pyrene (Benzo[def]phenanthrene)	M, I		2/8/87-2/5/89	1, 2.01, 2.03, 2.05 thru 2.08, 2.11 thru 2.14, 2.16, 2.17, 9.02, 10.05, 10.06	2/6/89
563-41-7	Hydrazinecarboxamide, monohydrochloride (Semicarbazide hydrochloride).	M, X/P, I, P		2/8/87-2/5/89	1, 2.08, 2.12, 2.13, 9.02, 9.03, 9.06	2/6/89
584-84-9	Benzene, 2,4-diisocyanato-1-methyl- (2,4-Toluene diisocyanate).	X/P, P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19,. 9.20, 9.22, 10.01, 10.02, 10.05, 10.08 thru 10.16, 10.23	2/6/89
		M, I		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.05, 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.09 thru 10.16,. 10.23	2/6/89
624-92-0	Disulfide, dimethyl (Dimethyl disulfide)	M, I		2/8/87-2/5/89	1, 2.01, 2.03, 2.05 thru 2.08, 2.11 thru 2.14, 2.16, 2.17, 9.02, 10.05, 10.06	2/6/89
1321-38-6	Benzene, diisocyanatomethyl- (Unspecific toluene diisocyanate).	X/P, P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.06, 10.08 thru 10.16,. 10.23	2/6/89

		M, I		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.05, 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.06, 10.09 thru. 10.16, 10.23	2/6/89
5470-11-1	Hydroxylamine, hydrochloride (Hydroxylammonium chloride).	M, X/P, I, P		2/8/87-2/5/89	1, 2.07, 2.12 thru 2.14, 3.04, 6.03 thru 6.05, 9.01	2/6/89
7782-50-5	Chlorine	M		2/8/87-2/5/89	1, 2.05 thru 2.07, 2.11, 4.01, 7.03 thru 7.06, 10.02, 10.08	2/6/89
7803-49-8	Hydroxylamine (Oxammonium)	M, X/P, I, P		2/8/87-2/5/89	1, 2.07, 2.12 thru 2.14, 3.04, 6.03 thru 6.05, 9.01	2/6/89
10039-54-0	Hydroxylamine, sulfate (2:1) (Hydroxylammonium).	M, X/P, I, P		2/8/87-2/5/89	1, 2.07, 2.12 thru 2.14, 3.04, 6.03 thru 6.05, 9.01	2/6/89
10046-00-1	Hydroxylamine, sulfate (1:1) (Hydroxylamine acid sulfate).	M, X/P, I, P		2/8/87-2/5/89	1, 2.07, 2.12 thru 2.14, 3.04, 6.03 thru 6.05, 9.01	2/6/89
26471-62-5	Benzene, 1,3-diisocyanatomethyl- (Toluene diisocyanate).	X/P, P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.06, 10.08 thru 10.16, 10.23	2/6/89
		M, I		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.05, 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.06, 10.09 thru 10.16, 10.23	2/6/89

(b) List of trade names

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
91-08-7/584-84-9	X/P,P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.08 thru 10.16, 10.23	6/14/89
AD-20 Part A					
AD-20 Part B					
Andur 2-90 AP					
Andur 2-92 AP					
Andur 2-95 AP					
Andur 8 AP-LM					
Andur 9 AP-LM					
Andur 9000 APX					
Andur 2-72 DP					
Andur 5 DP-LM					
Andur 6 DP-LM					
Andur 7 DP-LM					
CC-130A					
CC-132A					
CC-133A					
Clear resin solution					
920C134 COROCOOL™ curing agent					
700C540 COROTHANE/curing agency					
975C623 COROTHANE/urethane clear glaze					
DP-1001-B Prepolymer					
DP-2077 Part A					
DP-3138 Part A					
DP-8448 Part A					
DP-8696-8					
DP-8696-8 Part A					
DP-8798 Part A					
DP-8837					
DP-9783 Part A					
DP-10469					
DP-10476 Part A					
DP-10490					
DP-10602					
DP-10856					
DP-10971					
DP-10974					
DP-10976					
DP-10979 Part A					
DP-11304					
DP-11933 Part A					
DP-11998					
DP-12079					
DP-12211					
DP-12488					
DP-12521					
DP-12768					
DP-12922 Part A					
DP-14381					
DP-14811					
DP-15227 Part A					
EN-4 Part A					
EN-5 Part A					
EN-6 Part A					
EN-7 Part A					
EN-8 Part A					
EN-9 OZR Part A					
EN-9 Part A					
EN-10 Part A					
EN-11 Part A					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
EN-12 Part A					
EN-1554 Part A					
Mondur TDS					
RN-1501					
RN-1505					
RN-1511					
RN-1512					
RN-1513					
RN-1526					
RN-1527					
Scuranate T 100					
Solithane 790: 3.2%					
Solithane S-113:6 to 7%					
ST-115 MF Part A					
ST-115 Part A					
Stepanfoam A-206-T					
Stepanfoam A-210-T					
Stepanfoam A-216-T					
Stepanfoam BH-610-T					
Stepanfoam BH-614-T					
Stepanfoam BX-105-C-6-T					
Stepanfoam BX-105-C-10-T					
Stepanfoam BX-105-C-14-T					
Stepanfoam BX-105-C-20-T					
Stepanfoam BX-273-8-T					
Stepanfoam C-605-T					
Stepanfoam C-608-T					
Stepanfoam C-614-T					
Stepanfoam CA-620-T					
Stepanfoam F-302-A-T Modified					
Stepanfoam F-202-T					
Stepanfoam F-302-T					
Stepanfoam F-302-T (odorless C)					
Stepanfoam F-403-T					
Stepanfoam F-403-T (odorless C)					
Stepanfoam F-506-T					
Stepanfoam F-506-T (odorless C)					
Stepanfoam F-516-T					
Stepanfoam G-302-T					
Stepanfoam G-302-T modified					
Stepanfoam G-304-T					
Stepanfoam G-304-T modified					
Stepanfoam G-306-T					
Stepanfoam G-306-T modified					
Stepanfoam G-308-T					
Stepanfoam G-308-T modified					
Stepanfoam G-502-T					
Stepanfoam G-504-T					
Stepanfoam G-506-T					
Stepanfoam G-508-T					
Stepanfoam H-102-N-T					
Stepanfoam H-402-N-T					
Stepanfoam H-602-N-T					
Stepanfoam H-103-T					
Stepanfoam H-104-T					
Stepanfoam H-106-T					
Stepanfoam J-108-T					
Stepanfoam KA8812					
Stepanfoam KA8821					
Stepanfoam KA8843					
Stepanfoam KA8846					
Stepanfoam KA8847					
Stepanfoam KA8848					
Stepanfoam KA8851					
Stepanfoam KA8852					
Stepanfoam KA8853					
Stepanfoam KA8854					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effecti date
Stepanfoam KA8855					
Stepanfoam KA8857					
Stepanfoam KA8858					
Stepanfoam KA8859					
Stepanfoam KA8860					
Stepanfoam KA8861					
Stepanfoam KA8865					
Stepanfoam KA8866					
Stepanfoam P-502-T					
Stepanfoam P-506-T					
Stepanfoam R-109					
Stepanfoam R-112					
Stepanfoam R-222					
Stepanfoam SX-195-T					
TDI 100					
Toluene diisocyanate 100					
Toluene diisocyanate R-30					
700C753 UH3/hardener					
Uralite 1060 Part A					
Uralite 1070 Part A					
Uralite 1090 Part A					
Uralite 3143 Part A					
Uralite 3144 Part A					
Uralite 3204 prepolymer					
Uralite 3206 prepolymer					
Uralite 3207 prepolymer					
Uralite 3209 prepolymer					
Uralite 3213 prepolymer					
Uralite 3214 prepolymer					
Uralite 3215 prepolymer					
Uralite 3232 prepolymer					
Uralite 3237 prepolymer					
Uralite 3241 prepolymer					
Uralite 3242 prepolymer					
Uralite 3243 prepolymer					
Uralite 3263 prepolymer					
Uralite 3268 prepolymer					
700C760 urethane/curing agent					
975C931 urethane moisture/cured clear 50-00-0500-04					
101-14-4	X/P,P		2/8/87-2/5/89	1, 9.01, 9.03, 9.06, 9.08, 9.12, 9.15	6/14/89
Activator M					
AH-5					
AH-18					
AH-20					
AH-23					
Andur 9000AS Part B					
Cuamine M					
Curene 185					
Curene 442					
Curene 3005					
Cyanaset M					
DP-2077 Part B black					
DP-2077 Part B green					
DP-5801-B green					
DP-6322-2 Part B					
DP-6325 Part B tan					
DP-6332 Part B					
DP-7626 Part B black					
DP-8513-B					
DP-10000 Part B					
DP-10000 Part B gray					
DP-10744 Part B					
DP-10847					
DP-11252 Part B					
DP-12105 Part B					
DP-14346 Part B					
EN-1554 Part B					
EN-1554 Part B black					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
ST-80 Part B brown					
ST-80 Part B green					
ST-80 Part B med					
ST-80 Part B red					
ST-90 Part B					
Suncure M					
TU-50A Part B					
TU-65 Part B					
TU-65 Part B green					
TU-70 Part B					
TU-70 Part B blue					
TU-79 Part B					
TU-79 Part B green					
TU-79 Part B med. blue					
TU-79 Part B red					
TU-80 Part B					
TU-80 Part B blue					
TU-80 Part B red					
TU-89 Part B					
TU-89 Part B black					
TU-89 Part B green					
TU-89 Part B red					
TU-89 Part B white					
Uracure 3730 Part B					
Uralite 3111 Part B					
Uralite 3113 Part B					
Uralite 3115 Part B					
Uralite 3117 Part B					
Uralite 3120 Part B					
Uralite 3121 Part B					
Uralite 3122 Part B					
Uralite 3128 Part B					
Uralite 3167 Part B					
Zebron 385					
Zebron 385 blue					
Zebron 385-6					
Zebron 385-6 gray					
Zebron 386					
Zebron 386 brown					
Zebron 386C					
Zebron 386 PC					
Zebron 486					
584-84-9 (See trade names listed under CAS No. entry 91-08-7.)					
1321-38-6/26471-62-5	X/P,P		2/8/87-2/5/89	1, 2.04 thru 2.09, 2.11 thru 2.16, 3 all, 4.01 thru 4.05, 5 all, 6.05, 7.01, 7.03 thru 7.06, 8.01, 8.05, 8.06, 8.23, 9.01 thru 9.15, 9.19, 9.20, 9.22, 10.01, 10.02, 10.05, 10.06, 10.08 thru 10.16, 10.23	6/14/89
AH-18					
AH-20					
AH-23					
Andur 8 AP					
Andur 8 AP W/24% TXIB					
Andur 8 APF					
Andur 8 APF (Vail)					
Audur 8 APF-LM					
Audur 9 AP					
Andur 9 AP-LM					
Andur 9 APF					
Andur 9 APF-LM					
Andur 70 DP					
Andur 80-5 AP					
Andur 90 AP					
Andur 93 AP					
Andur 95 AP					
Andur 520 DP					
Andur 700 AP					
Andur 720 DP					
Andur 800 AP					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
Andur 800 DP					
Andur 850 AP					
Andur 900 AP					
Andur 920 AP					
Andur 930 AP					
Andur 950 AP					
Andur 3300 AS Part A					
Andur 5000 DP					
Andur 5500 DP					
Andur 6500 DP					
Andur 7000 AS					
Andur 7000 DP					
Andur 7200 DP					
Andur 7500 DP					
Andur 8000 AP					
Andur 8200 AP					
Andur 8500 AP					
Andur 9000 AP					
Andur 9200 AP					
Andur 9000 AS Part A					
Andur 9500 AP					
Andur CP-9000					
Andurcoat 60					
Autoflex component A					
Bayfit 540 A					
Bayfit 550 A					
Bayfit 551 A					
Bayfit 552 A					
Bayfit 554 A					
Bayfit 555 A					
Bayfit 556 A					
Bayfit 880-A					
CE-1155-35 Part A					
CE-1157-30					
CE-1163					
CE-1164					
DP-1001-B prepolymer					
DP-1963 Part A					
DP-4541 Part A					
DP-4736 Part A					
DP-5758 A					
DP-6332 Part A					
DP-6872 Part A					
DP-8222					
DP-8348-3 Part A					
DP-8449					
DP-8536 black					
DP-8536 part A					
DP-8806					
DP-9170					
DP-10000 Part A					
DP-10485					
DP-10561					
DP-10744 Part A					
DP-11021					
DP-11251 Part A					
DP-11252 Part A					
DP-11289 Part A					
DP-11321 Part A					
DP-11339 Part A					
DP-11373 Part A					
DP-12105 Part A					
DP-12390 Part A					
DP-12752 Part A					
DP-12768					
DP-12792 Part A					
DP-12816 Part A					
DP-14120 Part A					
DP-14346 Part A					
DP-14455 Part A					
DP-14552 Part A					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
DP-14726 Part A					
DP-14943 Part A					
DV-5159					
Elastan 6054U Iso					
Elastan 6055U Iso					
Elastan 6059U Iso					
Elastocast 7050U Iso					
Elastoflex C 2006U Iso					
Elastoflex C 2007U Iso					
Elastoflex C 2010U Iso					
Elastoflex C 2013U Iso					
Elastoflex C 2024U Iso					
Elastoflex C 2025U Iso					
Elastoflex C 2034U Iso					
Elastoflex C 2035U Iso					
Elastoflex C 2036U Iso					
Elastoflex C 2038U Iso					
Elastoflex C 2048U Iso					
Elastoflex C 2066U Iso					
Elastoflex R 2017U Iso					
Elastopan S 4500U Iso					
Elastopor P 1059U Iso					
EN-2 Part A					
EN-3 Part A					
EN-1554 Part B Black					
EN-1554 Part B					
FR-1259 black					
Hypol 2000					
Hypol 2002					
Hypol 2003					
Hypol 3000					
Isocyanate 05					
Isocyanate 37 Normal					
Isocyanate 37 Rev.					
Isocyanate 56					
Lupranate 7525					
Lupranate 8020					
Lupranate T80 Type 1					
Lupranate T80 Type 2					
Lupranate T80 Type 3					
Lupranate T80 Type 4					
Lupranate TM 105					
LX 700 Iso					
MDI/TDI Based Iso					
Mondur 000					
Mondur 102					
Mondur 425					
Mondur 428					
Mondur 437					
Mondur 445					
Mondur 446					
Mondur 450					
Mondur 452					
Mondur 466					
Mondur 473					
Mondur 494					
Mondur 510					
Mondur 521					
Mondur 531					
Mondur 532					
Mondur 536					
Mondur 537					
Mondur 539					
Mondur 545					
Mondur 569					
Mondur 574					
Mondur 595					
Mondur A-39-S					
Mondur HR					
Mondur MT-40					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effectiv date
Mondur T-422					
Mondur TD					
Mondur TD-80 all grades					
Mondur TD-564					
Multrathane 000					
PBA-2279 (Formerly 4397-32-5)					
Pecora Duramem 600CTF					
Pecora Duramem H-500					
Pecora Duramem R-500					
Pecora Duramem V-500					
Pecora Dynaflex					
Pecora Dynatred					
Pecora Dynatrol I					
Pecora Dynatrol II					
Pecora Dynaweld					
Pecora Urexpan NR-200					
Pecora Urexpan NR-201					
Pecora Urexpan NR-300					
PX Iso 1					
PX Iso 2					
PX Iso 12					
PXI SF-52 Iso					
PXI 3453M Iso					
PXI 4502-03 Iso					
PXI 4744-63 Iso					
PXI 4834-64 Iso					
PXI 5157-82 Iso					
PXO 38-01 Iso					
PXO 44U-39 Iso					
PXO 47-03 Iso					
PXO 68-12 Iso					
PXO 100-18 Iso					
PXO 135-32 Iso					
PXO 1091-36 Iso					
Resale Isocyanate					
RN-1503					
RN-1515					
RN-1520					
RN-1521					
RN-1525					
RN-1558					
RN-1559					
RN-1560					
RN-2000					
RN-2025					
RN-3000					
RN-3038					
RN-3038ER					
RN-3039					
RN-3050					
Rubinate TDI 80/20					
Scuranate BT (inactive)					
Scuranate MT 37 (inactive)					
Scuranate T 65					
Scuranate T 80					
Scuranate T 80P					
Scuranate TB 826					
Scuranate TB 831					
Solithane 291: 3.2%					
Spenkel M 21-40X					
Spenkel M 21-47X					
Spenkel M 21-Z-40					
Spenkel M 26					
Spenkel M 37-A6X-42					
Spenkel M 37-A6X-45					
Spenkel M 80-A6X-50					
Spenkel M 86-50CX					
Spenkel M 86-50E					
Spenkel M 86-A6X-50					
Spenkel M 86-Z-50					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
Spenkel P 14-75S					
Spenkel P 49-A6-60					
Spenkel P 49-A6X-60					
Spenkel P 82-K4-75					
Spenkel P 1976					
Spenkel P 4146-60A1X					
Spenkel P 4448-40AX					
Spenkel P 4820-32A1X					
Spenkel P 5562					
ST-80 Part A					
ST-90 Part A					
TDI Based Iso					
TDI 80					
TDI 65/35					
TDI 80/20					
TDI/MDI Based Iso					
Toluene diisocyanate 65/35					
Toluene diisocyanate 80/20					
Toluene diisocyanate T 80					
Toluene diisocyanate T 80 P					
Tremthane Urethane Sealant 4995					
TU-50A Part A					
TU-65 Part A					
TU-70 Part A					
TU-75 Part A					
TU-79 Part A					
TU-80 Part A					
TU-89 Part A					
UN-708 Isocyanate					
Uralite 0164 Part A					
Uralite 3109 prepolymer (Part A)					
Uralite 3110 prepolymer (Part A)					
Uralite 3111 Part A					
Uralite 3113 Part A					
Uralite 3115 Part A					
Uralite 3117 Part A					
Uralite 3121 Part A					
Uralite 3122 Part A					
Uralite 3124 Part A					
Uralite 3128 Part A					
Uralite 3167 Part A					
Uralite 3208 prepolymer					
Uralite 3211 prepolymer					
Uralite 3215 prepolymer					
Uralite 3216 prepolymer					
Uralite 3217 prepolymer					
Uralite 3231 prepolymer					
Uralite 3238 prepolymer					
Uralite 3239 prepolymer					
Uralite 3240 prepolymer					
Uralite 3257 prepolymer					
Uralite 3259 prepolymer					
Uralite 3261 prepolymer					
Uralite 3264 prepolymer					
Uralite 3267 prepolymer					
Uralite 3269 prepolymer					
Uralite 3270 prepolymer					
Uralite 3272 prepolymer					
Uralite 3274 prepolymer					
Uralite 3275 prepolymer					
Uralite 6108 Part A					
Urethane Windshield Sealant 2421-11					
Voranate 3071 Isocyanate					
Voranate 3138 Isocyanate					
Voranate DAC Isocyanate					
Voranate T-80 Type I Toluene diisocyanate					
Voranate T-80 Type II Toluene diisocyanate					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
Voranate T-7000 Isocyanate					
Voranate TCPA Isocyanate					
Voranate TM-821 Isocyanate					
WP-102					
Wuc 3083T Iso					
Wuc 3104T Iso					
Wuc 3129T Iso					
Wuc 3133T Iso					
Wuc 3187T Iso					
Wuc 3205T Iso					
Wuc 3214T Iso					
Wuc 3240T Iso					
Wuc 3246T Iso					
XAS 1565.01L Experimental Isocyanate Type I					
XAS 1565.00L Experimental Isocyanate Type II					
XAS 10848.00 Experimental Isocyanate					
XUS 15116.00 Developmental Isocyanate Blend					
5470-11-1 (See trade names listed under CAS No. entry 10039-54-0.)					
10039-54-0/5470-11-1	X/P,P		2/8/87-2/5/89	1, 2.07, 2.12 thru 2.14, 3.04, 6.03 thru 6.05, 9.01	6/14/89
C-41 Agfa Color Process F Kit-Color Developer Part A					
Agfa Color RSF 600 Rejuvenator Part B					
Agfa Color RSP 100 Regenerator Part C					
Agfa Color RSP 770 Regenerator Part C					
Agfa Pro CN Process Kit—Color Developer Replenisher Part C					
Arostit LF Powder					
Arostit LF Powder *					
Choice Film Developer, Part B					
Choice Print Developer, Part B					
Colenta Paper Developer, Part A					
LV-48 Colorprint Developer Replenisher					
Colorprint Developer Regenerator Part B					
Colorprint 101 ER Developer Replenisher					
Colorprint 101 ER Developer Replenisher Part A					
Colorprint-XL Developer Replenisher, Part B					
CPR-3 Developer Replenisher, Part C					
Dealer Supply Opt III Developer, Part B					
Dealer Supply Phase III Developer, Part B					
Dealer Supply Phase IV Developer, Part B					
E-Prep Neutralizer					
Electro-Brite A-474					
Electro-Brite E-Prep Neutralizer					
Electro-Brite N-466					
Electro-Brite N-466L					
Fuji CN-16Q NQ1-R Color Developer Replenisher					
Fuji Color Developer Replenisher NQ1-R					
Fuji CP-25Q PQ1-R Color Developer Replenisher					
Hydroxylamine Reagent					
KIS DN Film Developer, Part B					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
KIS Micro 2.002 Film Developer, Part B					
KIS Micro 2.002 Paper Developer, Part B					
KIS Super DN Film Developer, Part B					
KIS Super X-Press Developer Part B					
KIS Ultra X-Press Developer, Part A					
Kodak Developer Replenisher-Process R-3, MX 1238-1					
Kodak Developer Replenisher-MX 1341					
Kodak Developer Replenisher-RT MX-1286-2					
Kodak Double Check Position Proofing Developer Replenisher					
Kodak EA-5 Neutralizer and Replenisher					
Kodak Ektachrome Movie Neutralizer and Replenisher					
Kodak Ektachrome R-3 Color Developer and Replenisher					
Kodak Ektachrome R-3000 Color Developer					
Kodak Ektaprint 2 Developer					
Kodak Ektaprint 2 Developer and Replenisher					
Kodak Ektaprint 2 Developer and Replenisher LORR					
Kodak Ektaprint 2 Developer and Replenisher LORR H					
Kodal Ektaprint 2 Developer and Replenisher LOPR M					
Kodak Ektaprint 2 Developer and Replenisher RT					
Kodak Ektaprint 2 Processing Kit					
Kodak Ektaprint 200 Developer					
Kodak Ektaprint R-100 Color Developer and Replenisher					
Kodak Ektaprint R-1000 Color Developer					
Kodak Ektaprint R-1000 Processing Kit					
Kodak Flexicolor AR Developer Replenisher					
Kodak Flexicolor AR Developer Replenisher LORR					
Kodak Flexicolor Developer					
Kodak Flexicolor Developer Replenisher					
Kodak Flexicolor Developer Replenisher LORR					
Kodak Flexicolor Developer Regenerator, MX-1445					
Kodak Flexicolor Developer Replenisher, MX-1210-3					
Kodak Flexicolor Processing Kit for Process C-41					
Kodak Flexicolor Replenisher, RT, MX-1398					
Kodak Hobby-Pac Color Reversal Kit					
Kodak Hobby-Pac Negative Film Kit					
Kodak ME-4/ECO-3 Neutralizer and Replenisher					
Kodak MX1445 Developer Regenerator					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
Kodak Neutralizer and Replenisher, Process E-4					
Kodak Neturalizer, Process E-4					
Kodak Neutralizing Agent NA-1					
Konica Color-7 Developer Replenisher					
N-1 Konica Color Developer Replenisher					
N-1B Konica Color Developer Solution					
P-1 Konica Color Developer Replenisher					
Manver II Hardness Indicator (Reagent)					
Negacolor Developer Replenisher, Part B					
Negacolor-2 Developer Replenisher, Part B					
Negacolor-LR Developer Replenisher, Part B					
Photo KIS Developer, Part A					
Posakwik Developer Replenisher (Cat. No. 822271), Part A					
Posakwik Developer Replenisher (Cat. No. 821271, 821275) Part B					
Process 63 CDR Color Developer Replenisher Part C					
Process 63 CDR Color Developer/Replenisher Working Strength					
Process 70 CDJ Color Developer Rejuvenator Part B					
Process 70 CDR Color Developer Replenisher					
Process 70 CDR Color Developer/Replenisher Working Strength					
Process 70 CD-LR Color Developer Replenisher Part B					
Process 70 CD-LR Color Developer/Replenisher Working Strength					
Process 71 CDR Color Developer/Replenisher Working Strength					
Process 71 CDR Color Developer Replenisher Part B					
Process 92 CDJ Color Developer Rejuvenator Part C					
Process 92 CDR Color Developer/Replenisher Part C					
Process 92 CDR Color Developer/Replenisher Working Strength					
Process 92 CDR Professional Color Developer					
Process 92 CDR Professional Color Developer Replenisher Part C					
Process 92 CD-LR Color Developer Replenisher Part B					
Process 92 CD-LR Developer/Replenisher Working Strength					
Process 92 CD-MR Color Developer Replenisher Part B					
Process 92 DC-MR Color Developer/Replenisher Working Strength					
Process 92 CDR-RT Part C					
Process 92 CDR-RT Working Strength					
Recoprint 92CDR-RT Color Developer/Replenisher Part C					

CAS No./trade name	Who must report	Exemptions added (+) removed (−)	Coverage period	Question selection	Effective date
26471-62-5 (See trade names listed under CAS No. entry 1321-38-6.)					

[53 51721, Dec. 22, 1988, as amended at 54 FR 25398, June 14, 1989; 54 FR 30632, July 21, 1989; 54 FR 31680, Aug. 1, 1989]

PART 707—CHEMICAL IMPORTS AND EXPORTS

Subpart A—[Reserved]

Subpart B—General Import Requirements and Restrictions

Sec.
707.20 Chemical substances import policy.

Subpart C—[Reserved]

Subpart D—Notices of Export Under Section 12(b)

707.60 Applicability and compliance.
707.63 Definitions.
707.65 Submission to agency.
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707.70 EPA notice to foreign governments.
707.72 Termination of reporting requirements.
707.75 Confidentiality.

AUTHORITY: 15 U.S.C. 2611(b) and 2612.

SOURCE: 45 FR 82850, Dec. 16, 1980, unless otherwise noted.

Subpart A—[Reserved]

Subpart B—General Import Requirements and Restrictions

§ 707.20 Chemical substances import policy.

(a) *Scope.* (1) This statement addresses the policy of the Environmental Protection Agency (EPA) on importation of chemical substances, mixtures, and articles under section 13 of the Toxic Substances Control Act (TSCA; 15 U.S.C. 2601 et seq.). In particular, it addresses aspects of the regulation promulgated by the United States Customs Service (Customs), Department of the Treasury (19 CFR 12.118 through 12.127, and 127.28 [amended]) to implement section 13 of TSCA, 15 U.S.C. 2612. Section 13 requires the Secretary of the Treasury to refuse entry into the Customs territory of the United States of a chemical substance, mixture, or article if it does not comply with rules in effect under TSCA, or if it is offered for entry in violation of TSCA or rules or orders under TSCA.

(2) In addition to this statement of policy, EPA will continue, as necessary, to address problems associated with imports in rulemaking and other actions under individual sections of TSCA, i.e., sections 4, 5, 6, 7, 8, and 12. Sections 5, 6, and 7 apply directly to imports subject to the section 13 requirements. Section 12 may apply to export of a shipment that is refused entry under section 13. Importers may have obligations under sections 4 and 8; section 4 and 8 requirements for importers would not apply to individual chemical shipments and thus are not included under section 13 requirements. Interested persons should refer to the records of these individual rulemaking actions for specific information and guidance.

(b) *Objectives.* (1) TSCA is intended to be comprehensive, and assure protection of health and the environment from unreasonable risks associated with chemicals whether the chemicals are imported or produced domestically. This intent is manifested by the inclusion of importation in the Act's definition of the term "manufacture": "[M]anufacture means to import * * *, produce, or manufacture" (15 U.S.C. 2602(7)). Thus, importers are responsible for insuring that chemical importation complies with TSCA just as domestic manufacturers are responsible for insuring that chemical manufacture complies with TSCA.

(2)(i) The section 13 rule requires importers to sign the following statement for each import of chemical substances subject to TSCA: "I certify that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that I am not offering a chemical substance for entry in violation of TSCA or any applicable rule or order under TSCA." The certification will document that, in accordance with TSCA, the importer has taken the necessary steps to insure compliance.

(ii) The section 13 rule requires importers of chemicals not subject to TSCA (e.g., pesticides) to certify that compliance with TSCA is not required. Importers must certify this by signing the statement: "I certify that all chemicals in this shipment are not subject to TSCA." This is appropriate when a chemical import is not clearly identified as a pesticide or other chemical not subject to TSCA.

(3) The United States is involved in a major effort toward international harmonization in the control of chemicals. At such time as international agreement is reached on this issue, EPA would be prepared to modify its policy if necessary. EPA believes that its international harmonization efforts in the control of chemicals will protect health and the environment while fulfilling its obligations under the Trade Agreements Act of 1979.

(c) *The section 13 rule*—(1) *General certification.* (i) The rule promulgated under section 13 of TSCA by Customs, in consultation with EPA, implements the requirement of section 13 that chemical substances, mixtures, or articles not in compliance with TSCA, or whose importation is not in compliance with TSCA, shall be denied entry into the customs territory of the United States. The rule requires that importers certify by a statement, on the entry document or invoice, that any shipment of a chemical substance subject to TSCA, imported in bulk or as part of a mixture, complies with TSCA, and that it is not offered for entry in violation of TSCA or any rule or order under TSCA, or that the chemicals imported are not subject to TSCA.

(ii) The certification applies to TSCA sections 5, 6, and 7.

(iii) EPA expects that this certification will be based upon actual knowledge of the importer in most cases. However, EPA realizes that sometimes importers may not have actual knowledge of the chemical composition of imported mixtures. In these cases, the importer should attempt to discov
the chemical constituents of the shi
ment by contacting another party
the transaction (e.g., his principal
the foreign manufacturer). Th
person may be able to identify t
components of the mixture, or at lea
state that the substances comply wi
TSCA. The greater the effort an i
porter makes to learn the identities
the imported substances and the
compliance with TSCA, the small
his chance of committing a violati
by importing a noncomplying shi
ment. If a shipment is ultimately d
termined to have violated TSCA, t
good faith efforts of the importer
verify compliance, as evidenced
documents contained in his files, m
obviate or mitigate the assessment of
civil penalty under section 16
TSCA.

(2) *EPA enforcement.* (i) EPA a
Customs will monitor chemical i
ports to determine if shipments a
their import comply with the certific
tion requirements and the substanti
mandates of TSCA. Customs w
refuse entry to any shipment un
such time as the certification is pro
erly submitted. Customs will al
detain a shipment if there are reason
ble grounds to believe that such shi
ment or its import violates TSCA
regulations or orders thereunder.
violative shipment must either
brought into compliance, exported, d
stroyed, or voluntarily abandon
within the time periods prescribed
19 CFR 12.124 of the section 13 rule.

(ii) When EPA determines that
shipment should be detained, EPA w
identify the reasons for the detenti
and the necessary actions for an i
porter to bring the shipment into co
pliance with TSCA. If EPA has giv
this information to Customs befo
the district director issues the dete
tion notice, the information w
become part of the detention notic
The importer should contact one
the following EPA regional offices f
guidance as to the proper procedur
to correct any deficiencies in the shi
ment.

REGION I

John F. Kennedy Federal Building, Bosto
MA 02203 (617-223-0586)

REGION II

26 Federal Plaza, New York, NY 10278 (201-321-6669)

REGION III

Curtis Building, 6th and Walnut Streets, Philadelphia, PA 19106 (215-597-7668)

REGION IV

345 Courtland Street, NE., Atlanta, GA 30365 (404-881-3864)

REGION V

230 South Dearborn Street, Chicago, IL 60604 (312-353-2291)

REGION VI

1201 Elm Street, Dallas, TX 75270 (214-767-2734)

REGION VII

324 East 11th Street, Kansas City, MO 64106 (816-374-3036)

REGION VIII

1860 Lincoln Street, Denver, CO 80295 (303-837-3926)

REGION IX

215 Fremont Street, San Francisco, CA 94105 (415-974-8119)

REGION X

1200 Sixth Avenue, Seattle, WA 98101 (206-442-2871)

(iii) If Customs detains or refuses entry of a shipment (other than for failure to make the general certification) and the importer takes measures necessary to bring the shipment into conformity with the requirements of TSCA, EPA officials will reassess the shipment to determine its current compliance status. When a shipment is no longer in violation, EPA will notify the district director and the importer. The district director will then release the shipment. This notice will also serve as a determination to permit entry under 19 CFR 12.123(c) if a shipment is brought into compliance before the 19 CFR 12.123(c) decision-making process has been completed. If compliance is achieved after a 19 CFR 12.123(c) determination (adverse to the importer) has been made, the EPA notice to the district director will serve as a reversal of the decision to refuse entry.

(3) *EPA assistance.* Assistance in determining whether a chemical shipment is in compliance with TSCA can be obtained from: TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, Toll free (800-424-9065), In Washington, DC (554-1404), Outside the USA (Operator-202-554-1404).

[48 FR 55464, Dec. 13, 1983]

Subpart C—[Reserved]

Subpart D—Notices of Export Under Section 12(b)

§ 707.60 Applicability and compliance.

(a) Section 12(b) of the Toxic Substances Control Act requires any person who exports or intends to export a chemical substance or mixture to notify the Environmental Protection Agency of such exportation to a particular country if any of the following actions have been taken under the Act with respect to that chemical substance or mixture:

(1) Data are required under section 4 or 5(b),

(2) An order has been issued under section 5,

(3) A rule has been proposed or promulgated under section 5 or 6, or

(4) An action is pending, or relief has been granted under section 5 or 7.

(b) No notice of export will be required for articles, except PCB articles, unless the Agency so requires in the context of individual section 5, 6, or 7 actions.

(c) Any person who exports or intends to export polychlorinated biphenyls (PCBs) or PCB articles, for any purpose other than disposal, shall notify EPA of such intent or exportation under section 12(b). PCBs and PCB articles have the definitions published in § 761.3 of this title respectively.

(d) Any person who would be prohibited by a section 5 or 6 regulation from exporting a chemical substance or mixture, but who is granted an exemption by EPA to export that chemical substance or mixture, shall notify EPA under section 12(b) of such intent to export or exportation.

(e) Failure to comply with section 12(b) as set forth in these rules will be considered a violation of section 15(3) of the Toxic Substances Control Act, and will subject the exporter to the penalty, enforcement, and seizure provisions of sections 16 and 17 of the Toxic Substances Control Act.

§ 707.63 Definitions.

The definitions set forth in the Toxic Substances Control Act, section 3, apply for this part. In addition, the following abbreviations and definitions are provided for purposes of this rule:

(a) "EPA" means the Environmental Protection Agency.

(b) "Exporter" means the person who, as the principal party in interest in the export transaction, has the power and responsibility for determining and controlling the sending of the chemical substance or mixture to a destination out of the customs territory of the United States.

(c) "Regulated chemical" means any chemical substance or mixture for which export notice is required under § 707.60.

(d) "TSCA" means the Toxic Substances Control Act.

§ 707.65 Submission to agency.

(a) Exporters must notify EPA of their export or intended export of each regulated chemical in accordance with the following:

(1) The notice must be in writing;

(2) The notice must be for the first export or intended export to a particular country in a calendar year;

(3) The notice must be postmarked within seven days of forming the intent to export or on the date of export, whichever is earlier. A notice of intent to export must be based on a definite contractual obligation, or an equivalent intra-company agreement, to export the regulated chemical.

(b) If the EPA action that prompts the notice is a proposed rule, the requirement to submit export notices to EPA shall begin thirty days after publication of the action in the FEDERAL REGISTER.

(c) Notices shall be marked "Section 12(b) Notice" and sent to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protectio Agency, 401 M St., SW., Washingto DC 20460.

[45 FR 82850, Dec. 16, 1980, as amended 53 FR 12522, Apr. 15, 1988]

§ 707.67 Contents of notice.

The notice to EPA shall include:

(a) The name of the regulated chem ical as it appears in the section 4, 5, 6 or 7 action. If a category is regulated the name of the individual regulate chemical within that category, as we as the category, must be given. Th name shall be that which appears i Volume I of the EPA Chemical Sub stance Inventory, or its supplement if the chemical appears there.

(b) The name and address of the ex porter.

(c) The country (countries) o import.

(d) The date(s) of export or intende export.

(e) The section (4, 5, 6, or 7) o TSCA under which EPA has take action.

§ 707.70 EPA notice to foreign gover ments.

(a) Notice by EPA to the importin country shall be sent no later tha five working days after receipt by th Document Control Officer of the fir annual notification for each regulate chemical.

(b) Notices shall:

(1) Identify the regulated chemical.

(2) Summarize the regulatory actio taken, or indicate the availability o data under section 4 or 5(b) of TSCA

(3) Identify an EPA official to co tact for further information.

(4) Include a copy of the pertine FEDERAL REGISTER notice.

(c) Notices shall be sent to the cou try's ambassador in Washington, DC or other official designated by the fo eign government, and to the Unite States Department of State.

§ 707.72 Termination of reporting requir ments.

(a) The reporting requirements o Subpart D of this part are terminate for certain specific chemical sub stances and mixtures as set forth i this paragraph.

(1) When data required under Part 66 of this chapter have been submit-ed to EPA for a specific chemical sub-tance produced by a specific process, nd the data show no positive test esult as defined in § 766.3 of this hapter, reporting is no longer re-uired by persons who export or tend to export that substance pro-uced by that process.

(2) [Reserved]

(b) [Reserved]

2 FR 21437, June 5, 1987]

707.75 Confidentiality.

(a) A person may assert a claim of onfidentiality for any information hich is submitted to EPA in a notice.

(b) Any claim of confidentiality ust accompany the information at he time it is submitted to EPA. In the otice, the submitter must clearly entify the information that is aimed confidential by marking the pecific information on each page with label such as "confidential business formation", "proprietary", or "trade cret".

(c) Notwithstanding any claim of onfidentiality, information outlined § 707.70 will be included in the EPA otice to the foreign government. Vith this exception, EPA will disclose formation that is covered by a claim confidentiality asserted in accord-nce with this section only to the xtent permitted by, and in accord-nce with, the procedures set forth in SCA and Part 2 of this chapter.

(d) If a person does not assert a aim of confidentiality for informa-on at the time a notice is submitted EPA, the Agency may make the in-rmation public, including placement a public file, without further notice the person.

ART 710—INVENTORY REPORTING REGULATIONS

Subpart A—Compilation of the Inventory

ec.

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0.3 Applicability; reporting for the initial inventory and revised inventory: Who must report; who should report.
0.4 Scope of the inventory.

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710.6 When to report.
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710.39 Reporting form and instructions for submitting information.

Authority: 15 U.S.C. 2607(a).

Subpart A—Compilation of the Inventory

Source: 42 FR 64572, Dec. 23, 1977, unless otherwise noted. Designated as Subpart A at 51 FR 21447, June 12, 1986.

§ 710.1 Scope and compliance.

(a) This part establishes regulations governing reporting by certain persons who manufacture, import, or process chemical substances for commercial purposes under section 8(a) of the Toxic Substances Control Act (15 U.S.C. 2607(a)). Section 8(a) authorizes the Administrator to require reporting of information necessary for administration of the Act and requires EPA to issue regulations for the purpose of compiling an inventory of chemical substances manufactured or processed for a commercial purpose, as required by section 8(b) of the Act. Following an initial reporting period, EPA will publish an initial inventory of chemical substances manufactured or imported for commercial purposes. After a supplemental reporting period, EPA will publish a revised inventory including those additional chemical substances processed or used for commercial purposes or imported for commercial purposes as a part of a mixture or article. Further, in accordance with section 8(b), EPA periodically will amend the inventory to include new chemical substances which are manufactured or imported for a commercial purpose and reported under section 5(a)(1) of the Act. EPA also will revise the categories of chemical substances and make other amendments as appropriate.

(b) Section 15(3) of TSCA makes it unlawful for any person to fail or refuse to submit information required under these reporting regulations. In addition, section 15(3) makes it unlawful for any person to fail to keep, and permit access to, records required by these regulations. Section 16 provides that any person who violates a provision of section 15 is liable to the United States for a civil penalty and may be criminally prosecuted. Pursuant to section 17, the Government may seek judicial relief to compel submission of section 8(a) information and to otherwise restrain any violation of section 15.

NOTE: As a matter of traditional Agency policy, EPA does not intend to concentrate its enforcement efforts on insignificant clerical errors in reporting.

(c) Each person who reports under these regulations shall maintain records that document information reported under these regulations and, in accordance with the Act, permit access to, and the copying of, such records by EPA officials. Records required to be maintained under these regulations must be kept until January 1, 1983.

[42 FR 64572, Dec. 23, 1977, as amended at 45 FR 18375, Mar. 21, 1980]

§ 710.2 Definitions.

For the purposes of this part:

(a) The following terms shall have the meaning contained in the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321 et seq., and the regulations issued under such Act: "Cosmetic," "device," "drug," "food," and "food additive." In addition, the term "food" includes poultry and poultry products, as defined in the Poultry Products Inspection Act, 21 U.S.C. 453 et seq.; meats and meat food products, as defined in the Federal Meat Inspection Act, 21 U.S.C. 60 et seq.; and eggs and egg products, as defined in the Egg
Products Inspection Act, 21 U
1033 et seq.

(b) The term "pesticide" shall
the meaning contained in the Fe
Insecticide, Fungicide, and Ro
cide Act, 7 U.S.C. 136 et seq., an
regulations issued thereunder.

(c) The following terms shall
the meaning contained in the A
Energy Act of 1954, 42 U.S.C. 20
seq., and the regulations issued t
under: "byproduct material," "s
material," and "special nuclear m
al."

(d) "Act" means the Toxic
stances Control Act, 15 U.S.C. 26
seq.

(e) "Administrator" means th
ministrator of the U.S. Environm
Protection Agency, any employ
authorized representative of
Agency to whom the Administ
may either herein or by order del
his authority to carry out his
tions, or any other person who
by operation of law be authoriz
carry out such functions.

(f) An "article" is a manufac
item: (1) Which is formed to a sp
shape or design during manufa
(2) which has end use function(
pendent in whole or in part up
shape or design during end use
(3) which has either no chan
chemical composition during its
use or only those changes of com
tion which have no commercial
pose separate from that of the a
and that may occur as describ
§ 710.4(d)(5); except that fluids
particles are not considered articl
gardless of shape or design.

(g) "Byproduct" means a che
substance produced without sep
commercial intent during the m
facture or processing of another c
ical substance(s) or mixture(s).

(h) "Chemical substance" mean
organic or inorganic substance
particular molecular identity, in
ing any combination of such
stances occurring in whole or in
as a result of a chemical reacti
occurring in nature, and any che
element or uncombined radical; e
that "chemical substance" does *n*
clude:

(1) Any mixture,

(2) Any pesticide when manufactured, processed, or distributed in commerce for use as a pesticide,

(3) Tobacco or any tobacco product, but not including any derivative products,

(4) Any source material, special nuclear material, or byproduct material,

(5) Any pistol, firearm, revolver, shells, and cartridges, and

(6) Any food, food additive, drug, cosmetic, or device, when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

(i) "Commerce" means trade, traffic, transportation, or other commerce: (1) Between a place in a State and any place outside of such State, or (2) which affects trade, traffic, transportation, or commerce described in paragraph (i)(1) of this section.

(j) "Distribute in commerce" and "distribution in commerce" when used to describe an action taken with respect to a chemical substance or mixture or article containing a substance or mixture, mean to sell or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of, the substance, mixture, or article; or to hold, or the holding of, the substance, mixture, or article after its introduction into commerce.

(k) "EPA" means the U.S. Environmental Protection Agency.

(l) "Importer" means any person who imports any chemical substance or any chemical substance as part of a mixture or article into the customs territory of the U.S. and includes:

(1) The person primarily liable for the payment of any duties on the merchandise, or

(2) An authorized agent acting on his behalf (as defined in 19 CFR 1.11).

(m) "Impurity" means a chemical substance which is unintentionally present with another chemical substance.

(n) "Intermediate" means any chemical substance:

(1) Which is intentionally removed from the equipment in which it is manufactured, and (2) which either is consumed in whole or in part in chemical reaction(s) used for the intentional manufacture of other chemical substance(s) or mixture(s), or is intentionally present for the purpose of altering the rate of such chemical reaction(s).

NOTE: The "equipment in which it was manufactured" includes the reaction vessel in which the chemical substance was manufactured and other equipment which is strictly ancillary to the reaction vessel, and any other equipment through which the chemical substance may flow during a continuous flow process, but does not include tanks or other vessels in which the chemical substance is stored after its manufacture.

(o) "Manufacture" means to produce or manufacture in the United States or import into the customs territory of the United States.

(p) "Manufacture or import *'for commercial purposes'*" means to manufacture or import:

(1) For distribution in commerce, including for test marketing purposes, or

(2) For use by the manufacturer, including for use as an intermediate.

(q) "Mixture" means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that "mixture" does include:

(1) Any combination which occurs, in whole or in part, as a result of a chemical reaction if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined and if, after the effective date or premanufacture notification requirements, none of the chemical substances comprising the combination is a new chemical substance, and

(2) Hydrates of a chemical substance or hydrated ions formed by association of a chemical substance with water.

(r) "New chemical substance" means any chemical substance which is not included in the inventory compiled and published under subsection 8(b) of the Act.

(s) "Person" means any natural or juridicial person including any individual, corporation, partnership, or association, any State or political subdivision thereof, or any municipality, any interstate body and any department, agency, or instrumentality of the Federal Government.

(t) "Process" means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce (1) in the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance or mixture, or (2) as part of a mixture or article containing the chemical substance or mixture.

(u) "Process for 'commercial purposes' " means to process (1) for distribution in commerce, including for test marketing purposes, or (2) for use as an intermediate.

(v) "Processor" means any person who processes a chemical substance or mixture.

(w) "Site" means a contiguous property unit. Property divided only by a public right-of-way shall be considered one site. There may be more than one manufacturing plant on a single site. For the purposes of imported chemical substances, the site shall be the business address of the importer.

(x) "Small maufacturer or importer" means a manufacturer or importer whose total annual sales are less than $5,000,000, based upon the manufacturer's or importer's latest complete fiscal year as of January 1, 1978, except that no manufacturer or importer is a "small manufacturer or importer" with respect to any chemical substance which such person manufactured at one site or imported in quantities greater than 100,000 pounds during calendar year 1977. In the case of a company which is owned or controlled by another company, total annual sales shall be based on the total annual sales of the owned or controlled company, the parent company, and all companies owned or controlled by the parent company taken together.

Note: The purpose of the exception to the definition is to ensure that manufacturing and importers report production volumes for all chemical substances which they manufactured at one site or imported in quantities equal to or greater than 100,000 pounds during calendar year 1977.

(y) "Small quantities for purposes
scientific experimentation or analys
or chemical research on, or analysis o
such substance or another substanc
including any such research or anal
sis for the development of a produc
(hereinafter sometimes shortened
"small quantities for research and d
velopment") means quantities of
chemical substance manufactured, in
ported, or processed or proposed to b
manufactured, imported, or processe
that (1) are no greater than reason
ably necessary for such purposes an
(2) after the publication of the revise
inventory, are used by, or directl
under the supervision of, a technicall
qualified individual(s).

Note: Any chemical substances manufa
tured, imported or processed in quantiti
less than 1,000 pounds annually shall
presumed to be manufactured, imported
processed for research and developme
purposes. No person may report for the i
ventory any chemical substance in su
quantities unless that person can certif
that the substance was not manufacture
imported, or processed solely in small qua
tities for research and development, as d
fined in this section.

(z) "State" means any State of th
United States, the District of Colum
bia, the Commonwealth of Puert
Rico, the Virgin Islands, Guam, th
Canal Zone, American Samoa, th
Northern Mariana Islands, or an
other territory or possession of th
United States.

(aa) "Technically qualified individ
ual" means a person: (1) Who becaus
of his education, training, or exper
ence, or a combination of these fa
tors, is capable of appreciating th
health and environmental risks assoc
ated with the chemical substanc
which is used under his supervision
(2) who is responsible for enforcing ap
propriated methods of conducting sc
entific experimentation, analysis, o
chemical research in order to minimiz
such risks, and (3) who is responsibl
for the safety assessments and clear-
ances related to the procurement, stor-
age, use, and disposal of the chemica
substance as may be appropriate or re-
quired within the scope of conductin
the research and development activity
The responsibilities in paragraph
(aa)(3) of this section may be delegat-

ed to another individual, or other individuals, as long as each meets the criteria in paragraph (aa)(1) of this section.

(bb) "Test marketing" means the distribution in commerce of no more than a predetermined amount of a chemical substance, mixture, or article containing that chemical substance or mixture, by a manufacturer or processor to no more than a defined number of potential customers to explore market capability in a competitive situation during a predetermined testing period prior to the broader distribution of that chemical substance, mixture or article in commerce.

(cc) "United States," when used in the geographic sense, means all of the States, territories, and possessions of the United States.

§ 710.3 Applicability; reporting for the initial inventory and revised inventory: Who must report; who should report.

Based on reports from manufacturers and some importers of chemical substances, EPA will compile an initial inventory of chemical substances manufactured for commercial purposes. Paragraph (a) of this section identifies who must report for this initial inventory and who should report. After publication of the initial inventory, EPA will compile a revised inventory of chemical substances manufactured or processed for a commercial purpose based on reports from processors of chemical substances, and from importers of chemical substances as a part of mixtures or articles. Paragraph (b) of this section identifies who may report for this revised inventory. Paragraph (c) of this section identifies the persons not subject to the initial inventory.

(a) *The initial inventory*—(1) *Domestic manufacturers who must report concerning chemical substances.* Any person who manufactured a chemical substance(s) in the United States for a commercial purpose during calendar year 1977 must report concerning:

(i) All chemical substances which that person manufactured in the United States during calendar year 1977 at each site for which:

(A) Thirty percent or more of the weight of the products distributed from that site consists of products of the types described under Standard Industrial Classification (SIC) Group 28 or 2911, or

(B) The total pounds of reportable chemical substances manufactured at that site equals one million pounds or more; and

(ii) Any chemical substance not reported under paragraph (a)(1)(i) of this section that was manufactured at a site during calendar year 1977 in quantities equal to or greater than 100,000 pounds.

NOTE: Any person who is a "small manufacturer," as defined in § 710.2, and who has more than one site, is exempt from separately reporting the chemical substances manufactured at each site.

(2) *Importers who must report concerning chemical substances.* Any person who imported a chemical substance into the United States for a commercial purpose during calendar year 1977 must report concerning:

(i) All chemical substances which that person imported into the United States during calendar year 1977 if:

(A) Thirty percent or more of the weight of the products imported consists of products of the types described under Standard Industrial Classification (SIC) Group 28 or 2911, or

(B) The total pounds of reportable chemical substances imported equals one million pounds or more; and

(ii) Any chemical substance not reported under paragraph (a)(2)(i) of this section that was imported during calendar year 1977 in quantities equal to or greater than 100,000 pounds.

NOTE: These reporting requirements include all chemical substances imported in bulk form, including in cans, bottles, drums, barrels, packages, tanks, bags and other containers, but do not include chemical substances imported as part of mixtures or articles.

(3) *Other manufacturers and importers who should report chemcial substances.* (i) In order to ensure that a chemical substance is included in the initial inventory, any person who manufactures or imports, or who has manufactured or imported a chemical substance (including the importation of a chemical substance as part of a mixture or an article) for a commercial

purpose since January 1, 1975, may report concerning that chemical substance.

(ii) Any person permitted to report under paragraph (a)(3) of this section may either report individually or, in accordance with § 710.5(f), authorize a trade association or other agent to report on his behalf.

(b) *Revised inventory.* (1) During the reporting period for the revised inventory (§ 710.6(c)), a person may report concerning a chemical substance which was not included in the initial inventory if:

(i) The person has processed or used the chemical substance (including use in the manufacture of a mixture or article containing that chemical substance) for a commercial purpose since January 1, 1975; or

(ii) The person has imported the chemical substance as part of a mixture or article for a commercial purpose since January 1, 1975.

(2) Any person permitted to report under paragraph (b) of this section either may report individually or, in accordance with § 710.5(f), may authorize a trade association or other agent to report on his behalf.

NOTE: The premanufacture notification requirements of section 5(a)(1)(A) of the Act for manufacturers of new chemical substances and importers of new chemical substances in bulk will begin 30 days after the publication of the initial inventory and will apply to all chemical substances not included in the initial inventory. The premanufacture notification requirements of section 5(a)(1)(A) will not be applied to importers of chemical substances as part of a mixture until 30 days after publication of the revised inventory. In addition, section 15(2) of the Act as it relates to section 5(a)(1)(A) will not be applied to persons who process or use for a commercial purpose chemical substances not on the inventory until after publication of the revised inventory.

(c) *Persons not subject to the initial inventory.* Persons who have only processed or used a chemical substance for a commercial purpose are not subject to the initial inventory requirements.

§ 710.4 Scope of the inventory.

(a) *Chemical substances subject to these regulations.* Only chemical substances which are manufactured, imported, or processed "for a commercial purpose," as defined in § 710.2, are subject to these regulations.

(b) *Naturally occurring chemical substances automatically included.* Any chemical substance which is naturally occurring and:

(1) Which is (i) unprocessed or (ii) processed only by manual, mechanical or gravitational means; by dissolution in water; by flotation; or by heating solely to remove water; or

(2) Which is extracted from air by any means, shall automatically be included in the inventory under the category "Naturally Occurring Chemical Substances." Examples of such substances are: raw agricultural commodities; water, air, natural gas, and crude oil; and rocks, ores, and minerals.

(c) *Substances excluded by definition or section 8(b) of TSCA.* The following substances are excluded from the inventory:

(1) Any substance which is not considered a "chemical substance" as provided in subsection 3(2)(B) of the Act and in the definition of "chemical substance" in § 710.2(h);

(2) Any mixture as defined in § 710.2(q);

NOTE: A chemical substance that is manufactured as part of a mixture is subject to these reporting regulations. This exclusion applies only to the mixture and not to the chemical substances of which the mixture is comprised. The term "mixture" includes alloys, inorganic glasses, ceramics, frits, and cements, including Portlant cement.

(3) Any chemical substance which is manufactured, imported, or processed solely in small quantities for research and development, as defined in § 710.2(y); and

(4) Any chemical substance not manufactured, processed or imported for a commercial purpose since January 1 1975.

(d) *Chemical substances excluded from the inventory.* The following chemical substances are excluded from the inventory. Although they are considered to be manufactured or processed for a commercial purpose for the purpose of section 8 of the Act, they are not manufactured or processed for distribution in commerce as chemical substances *per se* and have no commer cial purpose separate from the substance, mixture, or article of which they may be a part.

NOTE: In addition, chemical substances excluded here will not be subject to premanufacture notification under section 5 of the Act.

(1) Any impurity.

(2) Any byproduct which has no commercial purpose.

NOTE: A byproduct which has commercial value only to municipal or private organizations who (i) burn it as a fuel, (ii) dispose of it as a waste, including in a landfill or for enriching soil, or (iii) extract component chemical substances which have commercial value, may be reported for the inventory, but will not be subject to premanufacturing notification under section 5 of the Act if not included.

(3) Any chemical substance which results from a chemical reaction that occurs incidental to exposure of another chemical substance, mixture, or article to environmental factors such as air, moisture, microbial organisms, or sunlight.

(4) Any chemical substance which results from a chemical reaction that occurs incidental to storage of another chemical substance, mixture, or article.

(5) Any chemical substance which results from a chemical reaction that occurs upon end use of other chemical substances, mixtures, or articles such as adhesives, paints, miscellaneous cleansers or other housekeeping products, fuels and fuel additives, water softening and treatment agents, photographic, films, batteries, matches, and safety flares, and which is not itself manufactured for distribution in commerce or for use as an intermediate.

(6) Any chemical substance which results from a chemical reaction that occurs upon use of curable plastic or rubber molding compounds, inks, drying oils, metal finishing compounds, adhesives, or paints; or other chemical substances formed during manufacture of an article destined for the marketplace without further chemical change of the chemical substance except for those chemical changes that may occur as described elsewhere in this § 710.4(d).

(7) Any chemical substance which results from a chemical reaction that occurs when (i) a stabilizer, colorant, odorant, antioxidant, filler, solvent, carrier, surfactant, plasticizer, corrosion inhibitor, antifoamer or defoamer, dispersant, precipitation inhibitor, binder, emulsifier, de-emulsifier, dewatering agent, agglomerating agent, adhesion promoter, flow modifier, pH neutralizer, sequesterant, coagulant, flocculant, fire retardant, lubricant, chelating agent, or quality control reagent functions as intended or (ii) a chemical substance, solely intended to impart a specific physicochemical characteristic, functions as intended.

(8) Chemical substances which are not intentionally removed from the equipment in which they were manufactured.

NOTE: See note to definition of "intermediate" at § 710.2(n) for explanation of "equipment in which it was manufactured."

§ 710.5 How to report.

(a) *General instructions.* (1) Except for small manufacturers or small importers, any person who is required to report under § 710.3(a)(1) or (2) shall follow the reporting procedures of paragraphs (b), (c), and (d) of this section.

(2) Any person who reports under § 710.3(a)(3) shall follow the reporting procedures of paragraphs (b), (c), (d)(1) and (3) of this section. In addition, the Agency encourages these persons to report in accordance with paragraphs (d)(2) and (4) of this section. A trade association or other agent may report aggregated production data under paragraph (d)(4) of this section.

(3) Any person who is required to report under § 710.3(a)(1) or (2) and who is a small manufacturer or small importer as defined in § 710.2 shall follow the reporting procedures of paragraphs (b), (c), and (d)(1) and (3) of this section except that such person is exempt from reporting production volume (for quantities less than 100,000 pounds) and site information.

(4) Any person who reports under § 710.3(b) shall follow the reporting

procedures of paragraphs (b), (c), and (d)(1) of this section.

(b) *Reporting the identity of a chemical substance.* (1) Any person reporting under these regulations should first read and carefully follow the reporting instructions, "Reporting for the Chemical Substance Inventory," published by and available through EPA.

(2) To report a chemical substance, a person should first consult the TSCA Candidate List of Chemical Substances and any amendment to the Candidate List. For assistance in using the Candidate List, consult the "Guide to the Use of the TSCA Candidate List of Chemical Substances."

(3) All persons required to report except "small manufacturers and importers" must use a separate Form A, B, or C to report chemical substances for each site. Small manufacturers and importers may report several chemical substances manufactured at different sites on one form, as appropriate.

(4) To report a chemical substance found in the Candidate List, or in an amendment to the list, a person must complete, sign, and submit EPA inventory report Form A (EPA Form No. 7710-3A). All forms, A through D, have OMB No. 1585 77011.

(5) To report a chemical substance not found in the Candidate List, or in an amendment to the list, but for which there is a Chemical Abstracts Service (CAS) Registry Number, a person must complete, sign and submit EPA inventory report Form B (EPA Form No. 7710-3B).

(6) To report a chemical substance which is not found in the Candidate List, or in an amendment to the list, and for which there is no known CAS Registry Number, a person must complete, sign, and submit EPA inventory report Form C (EPA Form No. 7710-3C). Persons must describe chemical substances on Form C as specifically as possible, in accordance with the instructions published by EPA, "Reporting for the Chemical Substance Inventory."

(7) To report a chemical substance whose chemical identity is claimed to be confidential, a person must complete, sign, and submit EPA inventory report Form C (EPA Form No. 7710-3C). In addition, he must substantiate the claim that the chemical identity is confidential at the time he submits the form to EPA, in accordance with instructions published in "Reporting for the TSCA Inventory" and § 710.7.

NOTE: The reporting instructions also describe a reporting Form D (EPA Form No. 7710-3D). This is for additional voluntary reports which may be submitted by any person who manufactures trademarked products comprised of chemical substances and is not a substitute for any of the reports required by these regulations.

(c) *Reporting polymers.* (1) To report a polymer a person must list in the description of the polymer composition at least those monomers used at greater than two percent (by weight) in the manufacture of the polymer.

(2) Those monomers used at two percent (by weight) or less in the manufacture of the polymer may be included as part of the description of the polymer composition.

NOTE: The "percent (by weight)" of a monomer is the weight of the monomer expressed as a percentage of the weight of the polymeric chemical substance manufactured.

(d) *Reporting other information concerning a chemical substance.* (1) For purposes of the initial inventory, designate whether the person manufactures and/or imports the chemical substance. For purposes of the revised inventory, designate whether the person processes and/or imports the chemical substance.

(2) Report the site(s) at which the person manufactures and/or imports the chemical substance. The site, as defined in § 710.2(w), for importers is their business address.

(3) Designate whether the person manufactures and processes the chemical substances only within a site and does not distribute the chemical substance, or any mixture or article containing that substance, for commercial purposes outside that site.

NOTE: This requirement does not apply to importers.

(4) Report the amount of the chemical substance which the person manufactured at each site and/or imported during calendar year 1977. For each

substance, report the digit (e.g., 0 through 9) which corresponds to the appropriate volume range, according to the following table. Enter "N" in the space provided for production amounts if the person did not manufacture or import the substance during calendar year 1977. Small manufacturers or importers, as defined in § 710.2(x), should enter "X" in the space provided for production amounts of less than 100,000 pounds (45,400 kilograms). If a small manufacturer or importer reports these production amounts, that person shall enter both "X" and the appropriate digits (e.g., X0, X1, or X2). For other production ranges, do not include an "X" (e.g., 3 through 9). Trade associations or other agents should enter "A" in the space provided for production amounts. If trade associations or agents report production volumes, they should enter both "A" and the appropriate digits (e.g., A2 or A6).

(0) Less than 1,000 pounds; Less than 454 kilograms.

(1) 1,000 to 10,000 pounds; 454 to 4,540 kilograms.

(2) 10,000 to 100,000 pounds; 4,540 to 45,400 kilograms.

(3) 100,000 to 1 million pounds; 45,400 to 454,000 kilograms.

(4) 1 million to 10 million pounds; 454,000 to 4.54 million kilograms.

(5) 10 million to 50 million pounds; 4.54 million to 22.7 million kilograms.

(6) 50 million to 100 million pounds; 22.7 million to 45.4 million kilograms.

(7) 100 million to 500 million pounds; 45.4 million to 227 million kilograms.

(8) 500 million to 1 billion pounds; 227 million to 454 million kilograms.

(9) over 1 billion pounds; over 454 million kilograms.

(A) Trade associations or other agents.

(e) *Importers.* (1) Any importer who reports a chemical substance for the inventory may authorize the foreign supplier of the imported chemical substance(s) to report to EPA on his behalf, if both the foreign supplier and the importer sign the declarations provided on the reporting forms. A foreign supplier may authorize an agent to act in his behalf.

(2) The importer has the ultimate responsibility for reporting all information required by this part and for the completeness and truthfulness of such information. If certain information is not or cannot be provided by the foreign supplier or his duly authorized agent, it must be provided by the importer.

(f) *Trade associations or other agents.* (1) A trade association or other agent may report on behalf of any person who is not required to report for the initial inventory under § 710.3 (a)(1) and (a)(2). Accordingly, a trade association or other agent may report on behalf of a manufacturer or importer of a chemical substance who chooses to report under § 710.3(a)(3), or any processor or user of a chemical substance, or any importer of a chemical substance as part of a mixture or an article who chooses to report under § 710.3(b).

(2) For every chemical substance reported by a trade association or other agent under this section, at least one manufacturer, importer or processor must have certified to that agent, and be able to document to EPA, in accordance with § 710.1(c), that the chemical substance was manufactured, imported, or processed for a commercial purpose since January 1, 1975.

§ 710.6 When to report.

(a) All reports for the initial inventory shall be submitted by May 1, 1978.

(b) All reports concerning chemical substances which are manufactured or imported for a commercial purpose for the first time during the period from May 1, 1978 to the effective date of premanufacture notification requirements shall be submitted when such manufacturing or importation begins.

(c) All reports for the revised inventory shall be submitted within 210 days after publication of the initial inventory.

§ 710.7 Confidentiality.

(a) A manufacturer, importer, or processor may claim that for a particular chemical substance any or all of the following items of information submitted under this part are entitled to confidential treatment:

(1) Company name.

(2) Site.

(3) The specific chemical identity.

(4) Whether the chemical substance is manufactured, imported, or processed.

(5) Whether the chemical substance is manufactured and processed only within one site and not distributed for commercial purposes outside that site.

(6) The quantity manufactured, imported, or processed.

(b) Any claims of confidentiality must accompany the information at the time it is submitted to EPA. The claims must appear on the form on which the information is submitted to EPA and in the manner prescribed on the form. In addition, any claims of confidentiality must be substantiated at the time the information is submitted to EPA in the manner specified in the form instructions.

(c) Any information that is covered by a claim made as specified will be disclosed by EPA only to the extent permitted by, and by means of, the procedures set forth in this section and in Part 2 of this title (41 FR 36902).

(d) If no claim accompanies information at the time it is submitted to EPA, the information may be made public by EPA without further notice to the submitter. Failure to provide substantiation of any claim asserted on the forms will be considered a waiver of the claim and will result in a determination that the information is not entitled to confidential treatment.

(e)(1) A claim of confidentiality may be asserted concerning the specific chemical identity of a particular chemical substance. This claim may be asserted by any submitter who believes that inclusion of the specific chemical identity on the inventory would reveal the trade secret fact that the particular chemical substance is manufactured or processed for commercial purposes.

(2) If a submitter asserts such a claim the submitter must

(i) Report the specific chemical identity,

(ii) Propose a generic chemical name which is only as generic as necessary to protect the confidential identity of the particular chemical substance,

(iii) Provide a detailed, written substantiation of the claim as specified in the reporting instructions,

(iv) Agree that EPA may disclose to a person with a *bona fide* intent to manufacture the substance (as defined in paragraph (g) of this section) the fact that the particular chemical substance is included in the inventory for purposes of TSCA section 5(a)(1)(A) premanufacture notification, and

(v) Have available, and agree to furnish to EPA upon request, for the particular chemical substance, either an X-ray diffraction pattern (in the case of inorganic substances) or a mass spectrum for the particular chemical substance (in the case of most other substances), a sample of the substance in its purest form, an elemental analysis, any additional or alternative spectra, or other data that may be required to resolve uncertainties with respect to the identify of the substance. Failure to meet any of these five requirements will be considered a waiver of the claim and will result in inclusion of the particular chemical identity on the inventory.

(f)(1) If a submitter asserts that the identity of a particular chemical substance should not be included on the inventory, the submitter has met the five requirements specified in paragraph (e) of this section, and the EPA General Counsel has made a determination, in accordance with Part 2 of this title that the particular chemical identity should not appear on the inventory because inclusion would disclose a trade secret. EPA will publish a generic chemical name in an appendix to the inventory rather than place the specific chemical identity on the inventory. Publication of a generic name in the appendix does *not* create a category for purposes of the inventory. Any person proposing to manufacture a substance included in the appendix under a generic name must submit notice under section 5(a)(1)(A) of the Act unless specifically exempted by EPA (see paragraph (g) of this section).

(2) EPA will examine the generic chemical name proposed by the submitter claiming confidentiality.

(i) If EPA determines that the generic name proposed by the submitter asserting the claim is only as generic as necessary to protect the confidential identity of the particular chemical

bstance, EPA will place that generic
me on the inventory.

(ii) If EPA determines that the ge-
ric name proposed by the submitter
serting the claim is more generic
an necessary to protect the confi-
ntial identity, EPA will ask the sub-
itter to submit further proposed ge-
ric names.

(iii) If EPA does not agree with the
rther proposed generic names, EPA
ll choose a generic name that EPA
termines is only as generic as neces-
ry to protect the confidential identi-
. EPA will give 30 days notice of this
oice to the submitter asserting the
aim. After the end of the 30-day
riod EPA will place the chosen ge-
ric name on the inventory.

(g)(1) If the particular chemical sub-
ance a person is proposing to manu-
cture is not included on the invento-
by specific name but does fall
ithin one of the generic chemical
ames in the appendix entitled "Con-
dential Identities," the person may
k EPA whether the specific sub-
ance is included on the inventory.
PA will answer such an inquiry only
EPA determines that the person has
bona fide intent to manufacture the
bstance.

(2) In order to establish a *bona fide*
tent to manufacture the specific
emical substance the person propos-
g to manufacture the chemical sub-
ance must submit to EPA:

(i) A signed statement that that
erson intends to manufacture the
bstance for commercial purposes,

(ii) A description of the research and
evelopment activities he has conduct-
d to date and the purposes for which
e substance will be manufactured,

(iii) An elemental analysis,

(iv) Either an X-ray diffraction pat-
ern (in the case of inorganic sub-
tances) or a mass spectrum (in the
ase of most other substances) of the
articular chemical substance,

(v) A sample of the substance in its
urest form, if requested, and

(vi) Any additional or alternative
pectra, or other data that may be re-
uired to resolve uncertainties with re-
pect to the identity of the chemical
ubstance.

(3)(i) Upon receipt of the informa-
ion specified in paragraph (g)(2) of this section, EPA may require the submitter who asserted the confidentiality claim for a specific chemical substance within the generic name to submit to EPA:

(A) Either an X-ray diffraction pattern or a mass or alternative spectrum for the substance,

(B) An elemental analysis of the substance,

(C) A sample of the substance in its purest form, if requested, and

(D) Any additional spectral or other data that may be required to resolve uncertainties with respect to the identity of the substance.

(ii) Failure to submit any of the information required by EPA under this paragraph (g)(3) will be construed as a waiver of the submitter's confidentiality claim, and EPA will place the specific chemical identity on the inventory without further notice to the submitter.

(4) EPA will compare the information submitted by the proposed manufacturer under paragraph (g)(2) of this section with the information submitted under paragraph (g)(3) of this section.

(5) If (i) the comparison of the elemental analyses and either the X-ray diffraction patterns or mass or alternative spectra is sufficiently similar to be consistent with a presumption that the chemical substances are the same, and (ii) comparison of any of the other submitted information affirms this presumption, EPA will tell the person proposing to manufacturer the particular chemical substance that the particular chemical substance is included on the inventory and, therefore, that premanufacture notification is not required.

(6) If (i) the comparison of either the X-ray diffraction patterns or the mass or alternative spectra is not sufficiently similar to be consistent with a presumption that the chemical substances are the same, and (ii) comparison of the other information affirms this conclusion, EPA will tell the person proposing to manufacture the particular substance that the information submitted does not support a conclusion that the substance is included on the inventory, and, therefore, that

premanufacture notification is required.

(7) A disclosure to a person with a *bona fide* intent to manufacture a particular chemical substance will not be considered a public disclosure.

§ 710.8 Effective date.

These regulations shall take effect on January 1, 1978.

Subpart B—Partial Updating of the Inventory Data Base

SOURCE: 51 FR 21447, June 12, 1986, unless otherwise noted.

§ 710.23 Definitions.

The definitions in § 704.3 of this chapter and § 710.2 of this Part apply except as provided in this section.

(a) "Master Inventory File" means EPA's comprehensive list of chemical substances which constitute the Chemical Substances Inventory compiled under section 8(b) of the Act. It includes substances reported under Subpart A of this part and substances reported under Part 720 of this chapter for which a Notice of Commencement of Manufacture or Import has been received under § 720.120 of this chapter.

(b) "Nonisolated intermediate" means any intermediate that is not intentionally removed from the equipment in which it is manufactured, including the reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel, and any equipment through which the substance passes during a continuous flow process, but not including tanks or other vessels in which the substance is stored after its manufacture.

(c) "Site-limited" means a chemical substance is manufactured and processed only within a site and is not distributed for commercial purposes as a substance or as part of a mixture or article outside the site. Imported substances are never site-limited.

§ 710.25 Chemical substances for which information must be reported.

Any chemical substance which is in the Master Inventory File at the beginning of a reporting period described in § 710.33, unless the chemical substance is specifically excluded by § 710.26.

§ 710.26 Chemical substances for which information is not required.

The following categories of chemical substances are excluded from the reporting requirements of this subpart. However, a chemical substance described in paragraphs (a), (b), or (c) of this section is not excluded from the reporting requirements of this subpart if that substance is the subject of a rule proposed or promulgated under section 4, 5(a)(2), 5(b)(4), or 6 of the Act, or is the subject of an order issued under section 5(e) or 5(f) of the Act, or is the subject of relief that has been granted under a civil action under section 5 or 7 of the Act.

(a) *Inorganic chemical substances.* Any chemical substance which does not contain carbon or contains carbon only in the form of carbonato $[=\mathrm{CO}_3]$, cyano [−CN], cyanato [−OCN], isocyano [−NC], or isocyanato [−NCO] groups, or the chalcogen analogues of such groups.

(b) *Polymers.* (1) Any chemical substance described with the word fragments "*polym*", "*alkyd", or "*oxylated" in the Chemical Abstracts Service Index or Preferred Nomenclature in the Chemical Substance Identities section of the 1985 edition of the Inventory or in the Master Inventory File, where the asterisk (*) indicates that any sets of characters may precede, or follow, the character string defined.

(2) Any chemical substance which is identified in the 1985 edition of the Inventory or the Master Inventory File as siloxane and silicone, silsesquioxane, a protein (albumin, casein, gelatin, gluten, hemoglobin), an enzyme, a polysaccharide (starch, cellulose, gum), rubber, or lignin. This exclusion, however, does not apply to a chemical substance which has been hydrolyzed, depolymerized, or chemically modified to the extent that the final product is no longer polymeric in structure.

(c) *Microorganisms.* Any combination of chemical substances that is a living organism, such as bacteria, eimeria, fungi, and yeasts. Any chemical

bstance produced from such a living
ganism is reportable unless other-
se excluded.
d) *Naturally occurring chemical
bstances.* Any naturally occurring
emical substance, as described in
710.4(b). The applicability of this ex-
usion is determined in each case by
e specific activities of the person
no manufactures the substance in
estion. Some chemical substances
n be manufactured both as de-
ribed in § 710.4(b) and by means
her than those described in
710.4(b). If a person described in
710.28 manufactures a chemical sub-
ance by means other than those de-
ribed in § 710.4(b), the person must
port regardless of whether the sub-
ance also could have been produced
described in § 710.4(b). Any chemi-
l substance that is produced from
ch a naturally occurring chemical
bstance described in § 710.4(b) is re-
rtable unless otherwise excluded.

710.28 Persons who must report.

Except as provided in §§ 710.29 and
0.30, the following persons are sub-
ct to the requirements of this sub-
rt. Persons must determine whether
ey must report under this § 710.28
r each chemical substance that they
anufacture at an individual site.

(a) *Persons subject to initial repor-
ng.* Any person who manufactured
r commercial purposes 10,000
ounds (4,540 kilograms) or more of a
emical substance described in
710.25 at any single site owned or
ontrolled by that person at any time
uring the person's latest complete
rporate fiscal year before August 25,
986.

(b) *Persons subject to recurring re-
orting.* Any person who manufac-
red for commercial purposes 10,000
ounds (4,540 kilograms) or more of a
emical substance described in
710.25 at any single site owned or
ontrolled by that person at any time
uring the person's latest complete
rporate fiscal year before August 25,
990, or before August 25 at four-year
tervals thereafter.

(c) *Special provisions for importers.*
or purposes of paragraphs (a) and (b)
f this section, the site for a person
ho imports a chemical substance described in § 710.25 is the site of the operating unit within the person's organization which is directly responsible for importing the substance and which controls the import transaction. The import site may in some cases be the organization's headquarters in the U.S. (See also § 710.35(b).)

§ 710.29 Persons not subject to this subpart.

A person described in § 710.28 is not subject to the requirements of this subpart if that person qualifies as a small manufacturer as that term is defined in § 704.3 of this chapter. Notwithstanding this exclusion, a person who qualifies as a small manufacturer is subject to this subpart with respect to any chemical substance that is the subject of a rule proposed or promulgated under section 4, 5(b)(4), or 6 of the Act, or is the subject of an order in effect under section 5(e) of the Act, or is the subject of relief that has been granted under a civil action under section 5 or 7 of the Act.

§ 710.30 Activities for which reporting is not required.

A person described in § 710.28 is not subject to the requirements of this subpart with respect to any chemical substance described in § 710.25 that the person manufactured or imported under the following circumstances:

(a) The person manufactured or imported the chemical substance described in § 710.25 solely in small quantities for research and development,

(b) The person imported the chemical substance described in § 710.25 as part of an article,

(c) The person manufactured the chemical substance described in § 710.25 in a manner described in § 720.30(g) or (h) of this chapter.

§ 710.32 Information to be reported.

Any person who must report under this subpart must submit the information prescribed in this section for each chemical substance described in § 710.25 that the person manufactured for commercial purposes in an amount of 10,000 pounds (4,540 kilograms) or more at a single site during a corporate fiscal year described in § 710.28. (The site for a person who imports a chemical substance is the site of the operating unit within the person's organization which is directly responsible for importing the substance and which controls the import transaction, and may in some cases be the organization's headquarters office in the U.S.). A respondent to this subpart must report information in writing or by computer tape as prescribed in this section, to the extent that such information is known to or reasonably ascertainable by that person. A respondent to this subpart must report information that applies to the specific corporate fiscal year for which the person is required to report. Information on chemical substances for which the chemical identities are claimed confidential under § 710.38 must be submitted in writing.

(a) *Reporting in writing.* Any person who chooses to report information to EPA in writing must do so by completing the reporting form contained in § 710.39, and must submit a separate form for each site for which the person is required to report. Information on substances for which the chemical identity is claimed confidential under § 710.38 must be submitted in writing on a separate reporting form; a respondent to this subpart must not report confidential and nonconfidential chemical substance identities on the same reporting form.

(b) *Reporting by computer tape.* Any person who chooses to report information to EPA by means of computer tape must submit the information prescribed in this paragraph (b), and must report separately for each plant site for which the person is required to report. Computer tape submitted in response to this subpart must meet EPA specifications, as described in the instruction booklet identified in § 710.39(b). Persons reporting by means of computer tape also must submit a separate reporting form, with certain basic data elements completed, as specified below, for each site for which the person is required to report. The information to be reported is as follows:

(1) On the reporting form, the name, address, city, State, Zip code, and telephone number of a person who w serve as technical contact for the r spondent company, and will be able t answer questions about the inform tion submitted by the company t EPA.

(2) On the reporting form, a certi cation statement signed and dated b an authorized official of the respon ent company, and a written statemen on the form that information is bei submitted by means of computer tap The computer tape shall be enclos with the reporting form.

(3) On the computer tape, the spec ic chemical name and Chemical A stracts Service (CAS) Registr Number of each chemical substan for which reporting is required und this subpart. A respondent to this su part may use other chemical identi cation numbers in lieu of CAS Regi try Numbers when a CAS Registr Number is not known to the respon ent as provided in the instructio booklet identified in § 710.39(b), i cluding EPA-designated Accessio Numbers for confidential substance EPA-assigned numbers for bona fi or Premanufacture Notification su missions or Test Market Exemptio Applications, or original Inventor form numbers.

(4) On the computer tape, the nam street address, city, State, and Zi code of each site at which 10,0 pounds (4,540 kilograms) or more of chemical substance for which repor ing is required under this subpart manufactured or imported. (The si for a person who imports a chemic substance is the site of the operati unit within the person's organizatio which is directly responsible for i porting the substance and which co trols the import transaction, and ma in some cases be the organization headquarters office in the U.S.). A re spondent to this subpart must inclu the appropriate Dun and Bradstre Number for each plant site reported.

(5) On the computer tape, a state ment for each substance for which i formation is being submitted indica ing whether the substance is manufa tured in the United States or importe into the United States.

(6) On the computer tape, a state ment for each substance for which i

nation is being submitted indicat- whether the substance is site-limit-

) On the computer tape, the total ame (in pounds) of each subject mical substance manufactured or orted at each site. This amount st be reported to two significant res of accuracy provided that the orted figures are within ±10 per- t of the actual volume.

.33 When to report.

l information reported to EPA in onse to the requirements of this part must be submitted during an ticable reporting period. The following reporting periods are pre- bed for this subpart.

) *Initial reporting period.* The first orting period is from August 25, 5 to December 23, 1986. Any person cribed in § 710.28(a) must report ing this period for each chemical stance described in § 710.25 that person manufactured during the porate fiscal year described in 0.28(a).

) *Recurring reporting periods.* The t recurring reporting period is from ust 25, 1990 to December 23, 1990. sequent recurring reporting peri- are from August 25 to December at 4-year intervals thereafter. Any son described in § 710.28(b) must ort during the appropriate report- period for each chemical substance cribed in § 710.25 that the person nufactured during the applicable porate fiscal year described in 0.28(b).

FR 21447, June 12, 1986; 51 FR 22521, e 20, 1986]

.35 Duplicative reporting.

) *With regard to section 8(a) rules.* person subject to the require- its of this subpart who previously complied with reporting require- its of a rule under section 8(a) of Act by submitting the information cribed in § 710.32 for a chemical stance described in § 710.25 to A, and has done so within one year he start of a reporting period de- bed in § 710.33, is not required to ort again on the manufacture of t substance at that site during that orting period.

(b) *With regard to importers.* This subpart requires that only one report be submitted on each import transaction involving a chemical substance described in § 710.25. When two or more persons are involved in a particular import transaction and each person meets the Agency's definition of "importer" as set forth in § 710.2(l) and § 704.3 of this chapter, they may determine among themselves who should submit the required report; if no report is submitted as required under this subpart, EPA will hold each such person liable for failure to report.

§ 710.37 Recordkeeping requirements.

Each person who is subject to the reporting requirements of this subpart must maintain records that document any information reported to EPA. For substances that are manufactured or imported at less than 10,000 pounds annually, volume records must be maintained as evidence to support a decision not to submit a report. Records relevant to reporting during a reporting period described in § 710.33 must be retained for a period of four years beginning with the effective date of that reporting period.

(Approved by the Office of Management and Budget under control number 2070-0070)

§ 710.38 Confidentiality.

(a) Any person submitting information under this subpart may assert a business confidentiality claim for the information. The procedures for asserting confidentiality claims are described in the instruction booklet identified in [illegible] 10.39. Information claimed as confidential in accordance with this section and those instructions will be treated and disclosed in accordance with the procedures in Part 2 of this chapter.

(b) A person may assert a claim of confidentiality for the chemical identity of a specific chemical substance only if the identity of that substance is treated as confidential in the Master Inventory File as of the time the report is submitted for that substance under this subpart.

(c) To assert a claim of confidentiality for the chemical identity of a specific chemical substance, the person must take the following steps:

(1) The person must report on the form contained in § 710.39, not by computer tape.

(2) The person must submit with the report detailed written answers to the following questions signed and dated by an authorized official.

(i) What harmful effects to your competitive position, if any, do you think would result from the identity of the chemical substance being disclosed in connection with reporting under this subpart? How could a competitor use such information? Would the effects of disclosure be substantial? What is the causal relationship between the disclosure and the harmful effects?

(ii) How long should confidential treatment be given? Until a specific date, the occurrence of a specific event, or permanently? Why?

(iii) Has the chemical substance been patented? If so, have you granted licenses to others with respect to the patent as it applies to the chemical substance? If the chemical substance has been patented and therefore disclosed through the patent, why should it be treated as confidential?

(iv) Has the identity of the chemical substance been kept confidential to the extent that your competitors do not know it is being manufactured or imported for a commercial purpose by anyone?

(v) Is the fact that the chemical substance is being manufactured or imported for a commercial purpose available to the public, for example in technical journals, libraries, or State, local, or Federal agency public files?

(vi) What measures have you taken to prevent undesired disclosure of the fact that this chemical substance is being manufactured or imported for a commercial purpose?

(vii) To what extent has the fact that this chemical substance is manufactured or imported for commercial purposes been revealed to others? What precautions have been taken regarding these disclosures? Have there been public disclosures or disclosures to competitors?

(viii) Does this particular chemical substance leave the site of manufacture in any form, as product, effluent, emission, etc.? If so, what measures have you taken to guard against discovery of its identity?

(ix) If the chemical substance leaves the site in a product that is available to the public or your competitors, can the substance be identified by analysis of the product?

(x) For what purpose do you manufacture or import the substance?

(xi) Has EPA, another Federal agency, or any Federal court made any pertinent confidentiality determinations regarding this chemical substance? If so, please attach copies of such determinations.

(3) If any of the information contained in the answers to the questions is asserted to contain confidential business information, the person must mark that information as "trade secret," "confidential," or other appropriate designation.

(d) If no claim of confidentiality accompanies information at the time it is submitted to EPA under this subpart or if substantiation required under paragraph (c) of this section is not submitted with the reporting form, EPA may make the information available to the public without further notice to the submitter.

§ 710.39 Reporting form and instructions for submitting information.

(a) All persons submitting written information in response to the requirements of this subpart must use original copies of the form contained in this § 710.39.

(b) Complete instructions for completing the reporting form and preparing a computer tape report are given in the EPA publication entitled "Instructions for Reporting for the Partial Updating of the TSCA Chemical Inventory Data Base." Reporting forms and instruction booklets may be obtained from the following address: Document Processing Center (TS-790) Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. ATTN: Inventory Update Rule. Telephone: (202) 382-3698 or (202) 755-4880.

(c) Completed reporting forms and computer tapes must be submitted to the address specified in § 710.39(b) of this part.

(d) The reporting form is as follows:

IMPORTANT: Before completing this form, carefully read the accompanying instructions

Form Approved OMB 2070-0
Approval expires 11-30-

US Environmental Protection Agency

EPA

Partial Updating of TSCA Inventory DataBase
Production and Site Report
(Section 8(a) Toxic Substances Control Act 15 USC 2607)

Report Number

FORM **U**

I. Certification Statement: I hereby certify to the best of my knowledge and belief that (1) all information entered on this form is complete and accurate, and (2) the confidentiality statements on the back of this form are true as to that information for which I have asserted a confidentiality claim.

Signature

Date

Name/Title *(Type or Print)*

II. Technical Contact *(Name, Company, Street address, City, State, ZIP Code)*

III. Plant Site *(Name, Street address, City, State, ZIP Code)*

Telephone No *(Include Area Code)* CBI ☐

Dun & Bradstreet Number

IV. Chemical Substance Identity/Activity/Confidentiality

a	**b**		**c**	**d**	**e**	**f**	**g**	**h**
LINE NO	CAS Registry and/or Other Identifying Number	Original Inventory Report Line No	A, B, C, F, P or T Codes A - Accession No B - Bona Fide No C - CAS Registry No F - Original Inventory Report No P - PMN No T - TMEA No	All Chemical Substance Identities on This Form Are Claimed ☐ Confidential ☐ Nonconfidential Specific Chemical Name	Activity M - Manufacture I - Import	Site Limited	Plant Site CBI Claim	Production Volume (pounds)
1					CBI ☐	CBI ☐	CBI ☐	CBI ☐
2					CBI ☐	CBI ☐	CBI ☐	CBI ☐
3					CBI ☐	CBI ☐	CBI ☐	CBI ☐
4					CBI ☐	CBI ☐	CBI ☐	CBI ☐
5					CBI ☐	CBI ☐	CBI ☐	CBI ☐
6					CBI ☐	CBI ☐	CBI ☐	CBI ☐
7					CBI ☐	CBI ☐	CBI ☐	CBI ☐
8					CBI ☐	CBI ☐	CBI ☐	CBI ☐
9					CBI ☐	CBI ☐	CBI ☐	CBI ☐
10					CBI ☐	CBI ☐	CBI ☐	CBI ☐

EPA Form 7740-8 (12-85)

Where To Get Supplies and Send Completed Forms:

TSCA Inventory Update Form U and a copy of the instruction booklet may be obtained from, and completed forms should be sent to

OTS Document Control Officer (TS-790)
U.S. Environmental Protection Agency
401 M Street, S.W., Washington, DC 20460
Attn: Inventory Update Rule
(202) 382-3698 or (202) 755-4880

Concerning EPA Disclosure of Information

f you submit information to EPA and claim any of it as confidential, PA will publicly disclose that information only as allowed by the rocedures set forth in 40 CFR Part 2. If no such claim accompanies he information when it is received, EPA may make that information ublic without further notice to you.

Confidentiality Statements

hemical substance identity and other information reported to EPA n the front of this form may be claimed confidential by checking the ppropriate CBI boxes in Blocks II and IV. In certifying this form, the erson signing in Block I attests to the truth of the following four tatements concerning all information claimed as confidential:

My company has taken measures to protect the confidentiality of he information, and it intends to continue to take such measures.

The information is not, and has not been, reasonably obtainable ithout our consent by other persons (other than governmental odies) by use of legitimate means (other than discovery based on a howing of special need in a judicial or quasi-judicial proceeding).

The information is not publicly available elsewhere.

Disclosure of the information would cause substantial harm to ur competitive position.

The person signing in Block I also attests to the truth of the appropriate statement(s) below concerning the information specifically claimed confidential for the particular chemical substance. By checking the CBI box under:

(II) Technical Contact/Company Identity: I assert that the linkage between my company identity (including the names appearing in Blocks I and II) and the information submitted on this form is confidential. (Note: checking this box does not claim plant site as confidential.)

(IVd) Chemical Identity: I assert that the identities of all of the chemical substances on this form are confidential.

(IVe) Manufacture/Import: I assert that whether I manufacture or import the specific chemical substance is confidential.

(IVf) Site Limited: I assert that whether the specific chemical substance is distributed for a commercial purpose outside the plant site identified in Block III is confidential.

(IVg) Plant Site: I assert that the link of the specific chemical substance to the plant site identified in Block III is confidential.

(IVh) Production Volume: I assert that the production volume of the specific chemical substance for the plant site identified in Block III is confidential.

When claiming that the identity of a chemical substance is confidential, you must provide written substantiation for such claim (see reporting instructions). Failure to do so may result in EPA making that information public without further notice to you.

EPA Form 7740-8 (12-85) Reverse

[51 FR 21447, June 12, 1986, as amended at 52 FR 20083, May 29, 1987; 53 FR 12523, Apr. 15, 1988]

PART 712—CHEMICAL INFORMATION RULES

Subpart A—General Provisions

Sec.

712.1 Scope and compliance.
712.3 Definitions.
712.5 Method of identification of substances for reporting purposes.
712.7 Report of readily obtainable information for Subparts B and C.
712.15 Confidentiality.

Subpart B—Manufacturers Reporting—Preliminary Assessment Information

712.20 Manufacturers and importers who must report.
712.25 Exempt manufacturers and importers.
712.28 Form and instructions.
712.30 Chemical lists and reporting periods.

AUTHORITY: 15 U.S.C. 2607(a).

SOURCE: 47 FR 26998, June 22, 1982, unless otherwise noted.

Subpart A—General Provisions

§ 712.1 Scope and compliance.

(a) This part establishes procedures for chemical manufacturers and processors to report production, use, and exposure-related information on listed chemical substances. Subpart A establishes requirements that apply to all reporting under this part. Subparts B and C, respectively, cover manufacturers' and processors' reporting.

(b) Chemical substances, mixtures, and categories of substances or mixtures which have been recommended by the Interagency Testing Committee for testing consideration by the Agency but not designated for Agency response within 12 months, will be added to § 712.30 using the procedure specified in § 712.30(c) only to the extent that the total number of designated and recommended chemicals has not exceeded 50 in any 1 year. Additional recommended but not designated chemicals may be added after proposal, and consideration of public comment.

[47 FR 26998, June 22, 1982, as amended at 50 FR 34809, Aug. 28, 1985]

§ 712.3 Definitions.

The definitions in section 3 of TSCA, 15 U.S.C. 2602, apply for this part. In addition, the following definitions apply:

(a) "Byproduct" means any chemical substance or mixture produced without a separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance or mixture.

(b) "EPA" means the U.S. Environmental Protection Agency.

(c) "Import in bulk form" means to import a chemical substance (other than as part of a mixture or article) in any quantity, in cans, bottles, drums, barrels, packages, tanks, bags, or other containers used for purposes of transportation or containment, if the chemical substance has an end use or commercial purpose separate from the container.

(d) "Importer" means anyone who imports a chemical substance, including a chemical substance as part of a mixture or article, into the customs territory of the U.S. and includes the person liable for the payment of any duties on the merchandise, or an authorized agent on his behalf. Importer also includes, as appropriate:

(1) The consignee.

(2) The importer of record.

(3) The actual owner if an actual owner's declaration and superseding bond has been filed in accordance with 19 CFR 141.20.

(4) The transferee, if the right to withdraw merchandise in a bonded warehouse has been transferred in accordance with Subpart C of 19 CFR Part 144. For the purposes of this definition, the customs territory of the U.S. consists of the 50 states, Puerto Rico, and the District of Columbia.

(e) "Impurity" means a chemical substance unintentionally present with another chemical substance or mixture.

(f) "Intermediate" means any chemical substance that is consumed, in whole or in part, in chemical reactions used for the intentional manufacture of other chemical substances or mixtures, or that is intentionally present for the purpose of altering the rates of

uch chemical reactions. (See also
aragraph (j) of this section.)

(g) "Known to or reasonably ascer-
ainable by" means all information in
person's possession or control, plus
ll information that a reasonable
erson similarly situated might be ex-
ected to possess, control, or know, or
ould obtain without unreasonable
urden.

(h) "Manufacture for commercial
urposes" means to import, produce,
r manufacture with the purpose of
btaining an immediate or eventual
ommercial advantage for the manu-
acturer and includes, among other
hings, such "manufacture" of any
mount of a chemical substance or
nixture:

(1) For commercial distribution, in-
luding for test marketing.

(2) For use by the manufacturer, in-
luding use for product research and
levelopment, or as an intermediate.
Manufacture for commercial purposes
lso applies to substances that are pro-
luced coincidentally during the manu-
acture, processing, use, or disposal of
nother substance or mixture, includ-
ng byproducts and coproducts that
re separated from that other sub-
tance or mixture, and impurities that
emain in that substance or mixture.
Byproducts and impurities may not in
hemselves have commercial value.
They are nonetheless produced for the
urpose of obtaining a commercial ad-
antage since they are part of the
nanufacture of a chemical produced
or a commercial purpose.

(i) "Mixture" means any combina-
ion of two or more chemical sub-
tances if the combination does not
ccur in nature and is not, in whole or
n part, the result of a chemical reac-
ion; except that "mixture" does in-
lude (1) any combination which
ccurs, in whole or in part, as a result
f a chemical reaction if the combina-
ion could have been manufactured
or commercial purposes without a
hemical reaction at the time the
hemical substances comprising the
ombination were combined, and if all
f the chemical substances comprising
he combination are included in the
EPA, TSCA Chemical Substance In-
entory after the effective date of the
remanufacture notification requirement under 40 CFR Part 720, and (2) hydrates of a chemical substance or hydrated ions formed by association of a chemical substance with water. The term mixture includes alloys, inorganic glasses, ceramics, frits, and cements, including Portland cement.

(j) "Non-isolated intermediate" means any intermediate that is not intentionally removed from the equipment in which it is manufactured, including the reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel, and any equipment through which the substance passes during a continuous flow process, but not including tanks or other vessels in which the substance is stored after its manufacture. (See also paragraph (f) of this section.)

(k) "Owned or controlled by the parent company" means the parent owns or controls 50 percent or more of the other company's voting stock or other equity rights, or has the power to control the management and policies of the other company.

(l) "Person" means any natural person, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity, any State or political subdivision thereof, any municipality, any interstate body, and any department, agency, or instrumentality of the Federal government.

(m) "Process for commercial purposes" means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce with the purpose of obtaining an immediate or eventual commercial advantage for the processor. Processing of any amount of a chemical substance or mixture is included. If a chemical or mixture containing impurities is processed for commercial purposes, then those impurities are also processed for commercial purposes.

(n) "Site" means a contiguous property unit. Property divided only by a public right-of-way shall be considered one site. There may be more than one manufacturing plant on a single site.

(o) "Test marketing" means distributing in commerce a limited amount of a chemical substance or mixture, or article containing such substance or mixture, to a defined number of potential customers, during a predetermined testing period, to explore market capability prior to broader distribution in commerce.

(p) "TSCA" means the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

§ 712.5 Method of identification of substances for reporting purposes.

(a) *Report on TSCA-regulable quantities.* Unless specifically otherwise required, respondents must report only about quantities of a chemical that is defined as a chemical substance under TSCA section 3(2).

(b) *Chemicals from natural sources.* A manufacturer of a chemical substance which is extracted from an ore, from oil, or from any other natural source must report only about the manufacturing steps for, and the uses of, that chemical, not about production of the natural source material or other crude precursors derived from the natural source material.

For example, persons who manufacture a chemical substance such as "sweetened naphtha, 64741-87-3," but do not refine the naphtha to produce "hexane, 110-54-3" would not report on hexane. Only the production of "hexane" as an isolated product must be reported—not previous production of more crude, complex substances such as naphtha from which hexane is extracted. Thus, persons who produce crude oil, ores, and other crude natural materials, but do not carry them through further manufacturing steps that produce a listed chemical have no reporting responsibilities under this Part. Note, however, that any method of extraction, refinement, or purification of a listed chemical substance is considered to be manufacturing for the purposes of this rule.

(c) *Chemical substances as marketed.* This part requires reporting about chemical substances as they are marketed or used in practice. The following preparations of a chemical substance must be reported as the substance itself, not as a mixture, since these preparations are regarded as the substance in practice.

(1) The chemical substance in aqueous solution.

(2) The chemical substance containing an additive (such as a stabilizer or other chemical) to maintain the integrity or physical form of the substance.

(3) The chemical substance in any grade of purity.

§ 712.7 Report of readily obtainable information for Subparts B and C.

TSCA section 8(a) authorizes EPA to require persons to report information that is known to or reasonably ascertainable by them. For purposes of Subparts B and C, however, a lesser standard applies. Companies must report information that is readily obtainable by management and supervisory employees responsible for manufacturing, processing, distributing, technical services, and marketing. Extensive file searches are not required.

§ 712.15 Confidentiality.

(a) Any person submitting information under this part may assert business confidentiality claims for the information as described in the pertinent reporting form and its instructions. Any information covered by a claim will be disclosed by EPA only as provided in the procedures set forth at 40 CFR Part 2.

(b) Persons must certify to the validity of a claim of confidentiality they make for information reported under this part, as specified on the reporting form.

(c) If no claim accompanies the information at the time it is submitted to EPA or if certification as to the claim is not made on the reporting form, EPA may place the information in an open file available to the public without further notice to the submitter.

Subpart B—Manufacturers Reporting—Preliminary Assessment Information

§ 712.20 Manufacturers and importers who must report.

Except as described in § 712.25, at the time a chemical substance is listed in § 712.3, the following persons must submit the "Manufacturer's Report—Preliminary Assessment Information" (as described in § 712.28) for each plant site at which they manufactured or imported the chemical substance during the reporting period specified in § 712.30:

(a) Persons who manufactured one or more of the chemical substances listed in § 712.30 for commercial purposes.

(b) Persons who imported in bulk form one or more of the chemical substances listed in § 712.30 for commercial purposes.

§ 712.25 Exempt manufacturers and importers.

(a) Persons who manufactured or imported the chemical substance during the reporting period, solely for purposes of scientific experimentation, analysis, or research, including research or analysis for product development, are not subject to reporting under § 712.20.

(b) Persons who, during the reporting period, manufactured or imported fewer than 500 kilograms (1100 pounds) of the chemical substance at a single plant site are not subject to reporting for that site under § 712.20.

(c) Persons who qualify as small manufacturers or importers in respect to a specific chemical substance listed in § 712.30 are exempt. However, this exemption does not apply with respect to any chemical in § 712.30 designated by an asterisk. A manufacturer is qualified as small and is exempt from submitting a report under this subpart for a chemical substance manufactured at a particular plant site if both of the following criteria are met:

(1) Total annual sales taken together of all sites owned or controlled by the foreign or domestic parent company were below $30 million for the reporting period;

(2) Total production of the listed substance for the reporting period was below 45,400 kilograms (100,000 pounds) at the plant site.

(d) Persons are not subject to reporting under § 712.20 if they manufactured or imported the chemical substance during the reporting period only in the following forms:

(1) As a byproduct that was not used or sold or that was formed as described in 40 CFR 710.4(d) (3) through (7).

(2) As a non-isolated interimediate.

(3) As an impurity.

[47 FR 26998, June 22, 1982; 47 FR 28382, June 30, 1982]

§ 712.28 Form and instructions.

(a) Manufacturers and importers subject to this Subpart must submit a single EPA Form No. 7710-35, "Manufacturer's Report—Preliminary Assessment Information," for each plant site manufacturing or importing a chemical substance listed in § 712.30.

(b) Reporting companies may submit their reports through individual plant sites or company headquarters as they choose. A separate form must be submitted for each plant site manufacturing the chemical substance.

(c) Forms must be sent (preferably by certified mail) to: Document Processing Center (TS-790) Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. ATTN: 8(a) PAIR Reporting.

(d) Instructions and a facsimile of the form are as follows:

INSTRUCTIONS FOR MANUFACTURER'S REPORT FORM PRELIMINARY ASSESSMENT INFORMATION

What chemicals to report – This form applies to chemical substances that are listed in 40 CFR 712.30.

Reporting period – Enter the months and years beginning and ending the 12-month period for which you report. This reporting period is listed with the chemical substance in 40 CFR 712.30.

Who must report – Manufacturers and importers must report. See 40 CFR 712.25 for exemptions from reporting.

How many forms to complete – For each chemical, complete a separate form for each plant site that manufactured the chemical.

If a site manufactured and imported the chemical, report both manufacture and import data for the site on a single form.

A company that imported the chemical, but did not process the imported quantity or manufacture an additional quantity, may submit a separate form for each import site or may submit a single form with the total data for all import sites.

Who may submit forms – Companies may choose to complete and submit forms to EPA from each plant site directly, or through company headquarters.

Retention of forms – You should keep a copy of each completed form. Refer to the preprinted Control Number (shown in the upper right corner on the front of the form) when communicating with EPA.

EPA assistance – For further information or to obtain copies of the Manufacturer's Report form, contact:

Industry Assistance Office (TS-799)
Office of Pesticides and Toxic Substances
Environmental Protection Agency
401 M Street, SW.
Washington, D.C. 20460
Toll free: (800) 424–9065
In Washington, D.C.: 554–1404
Outside the USA: Operator (202) 554–1404

I. CERTIFICATION

Technical certification – Certify the technical accuracy of data you report on the form by signing and dating the Technical Certification Statement. Print or type the name and title of the person who signs this statement.

Confidentiality certification – You may claim information confidential by marking appropriate boxes in sections III and IV. If you claim any information confidential, you must certify that the Confidentiality Statements are true for all information claimed confidential on the form. Do this by signing and dating the Confidentiality Certification Statement. Print or type the name and title of the person who signs this statement.

II. CHEMICAL IDENTIFICATION *(Complete A or B)*

Item A – If you are reporting on a chemical that has its CAS Number and Chemical Name listed in 40 CFR 712.30, enter the CAS Number and first fifteen (15) characters of the listed Chemical Name.

Enter N/A in section II, part B, in the spaces for Category Name and Inventory Form C Number.

Item B – If you are reporting a confidential chemical that is in a category listed in 40 CFR 712.30, enter the Category Name as listed, and enter the number of the Inventory Reporting Form C on which you reported the chemical for the TSCA Inventory. (If the Inventory Form C Number is not available, contact the Industry Assistance Office.)

In section II, part A, enter N/A in the spaces for CAS Number and Chemical Name.

III. RESPONDENT IDENTIFICATION

Confidentiality – Mark this box to claim confidential all Respondent Identification in section III. Note that you may not claim your identity confidential if you reported the chemical for the Inventory and did not claim your identity confidential at that time.

Item A – Enter the name, physical location address, and Dun and Bradstreet number of the plant site for which the data are reported.

If your company imported but did not further process or manufacture additional chemicals, and you choose to submit data for all import sites on a single form, enter N/A.

If the plant site does not have a Dun and Bradstreet number, enter N/A in that space.

Item B – Mark the appropriate box to show whether the plant site or corporate headquarters is submitting this form. Enter the corresponding name and mailing address.

If corporate headquarters submits this form, enter its Dun and Bradstreet number. If it does not have a Dun and Bradstreet number, or if the plant site submits this form, enter N/A in the space for Dun and Bradstreet number.

EPA will send all correspondence regarding the form to this address.

Item C – Enter the name, title, and telephone number (including area code) of a person for EPA to contact if there are questions about data reported on this form.

Item D – EPA will acknowledge receipt of the form to the person named in this item.

IV. PRELIMINARY ASSESSMENT INFORMATION

TSCA Regulable Quantities – Except under items 4 and 5, do not report any quantity of chemical substance that is manufactured or processed solely for use as: a pesticide; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material (as terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act); firearms or ammunition; or food, food additives, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug and Cosmetic Act). The above are not TSCA regulable.

Some chemical substances are manufactured for both TSCA and non-TSCA regulable purposes. Thus, under items 4 and 5, include total production of the chemical stream for both TSCA and non-TSCA regulable quantities.

PART A: PLANT SITE ACTIVITIES

Accuracy – For each item, provide numbers that represent your best estimates based on readily obtainable data.

Item 1 – Enter the total quantity of the chemical substance imported in bulk during the reporting period. If you import, but do not further process the imported quantity or manufacture an additional quantity, answer this item and part B only.

Item 2 – Enter the quantity of chemical domestically manufactured during the reporting period, not counting the losses reported in item 3a.

Items 3a–3d – In 3a, report the total quantity lost in manufacture of the substance during the reporting period. Report only routine losses. Do not report unusual spills or accidents. In calculating estimates for quantities not recovered you may: (1) use measured losses, if available, or emission factors and other calculated releases from individual sources; or, (2) if these are not available, or only account for a portion of the total loss, you may make a simple mass balance estimate of expected yield minus actual yield, where actual yield is the value reported in item 2. This quantity in 3a should then be broken down into the three categories below (i.e., 3b + 3c + 3d = 3a). Specify the accuracy you report for 3b, 3c, and 3d, e.g., 1000 kg ± 30%.

- 3b. **Quantity lost to the environment** – This covers fugitive emissions to the atmosphere and other losses not described in 3c and 3d.
- 3c. **Quantity in wastes treated to destroy the chemical.**
- 3d. **Quantity in wastes not treated to destroy the chemical** – This includes, for example, any quantity disposed of in any landfill, surface impoundment, municipal sewage, or storage.

Items 4–7 – Items 4–7 in part A require you to describe the manufacturing process and your use of the chemical in terms of the number of workers and quantity of substance associated with three process categories. Three process categories are described below, followed by instructions for calculating quantities, worker-hours, and number of workers. Additional instructions concerning items 4 through 7 are also listed.

PROCESS CATEGORIES

Enclosed Process – The process is designed and operated so that there is no intentional release of the chemical. In this process category, only fugitive or inadvertent releases occur and special measures are taken to prevent worker exposure and environmental contamination. "Special measures" refer to procedures and equipment that are monitored and used to prevent worker exposure, and scrubbers and other recovery equipment employed to prevent environmental release. Equipment with emergency pressure relief venting would be allowed in this category; routine venting would not. With regard to handling the manufactured chemical, persons who handle closed packages containing the material would be counted under "enclosed process." Persons who package or transfer the unpackaged chemical would be counted in one of the following categories.

Controlled Release Process – The process is operated in a controlled manner to minimize release of the chemical into the workplace. Releases should generally be within prescribed limits. These limits may be dictated by government regulations or by company guidelines. If the chemical is vented outside the plant, the process is a "controlled release" process. Do not count general space ventilation fans.

Open Process – The chemical is routinely in direct contact with the atmosphere (workplace or outside the plant) and no measures are taken to prevent release. For example, reaction vessels are open vats, the chemical is transported or stored in open containers, or the chemical is freely vented into the workplace atmosphere.

QUANTITIES

Process Category – Enter the greatest quantity that is processed in each process category. If there is more than one process stream, calculate each stream separately and then add the values for each process category. If a quantity of the chemical passes in series through an enclosed process and then passes through an open process, the same quantity would be reported twice, once under each process category. (The sum of these quantities may be greater than 100% of the total quantity manufactured.)

Example 1 – A company manufactures technical grade chemical x in four steps.

$$\underset{\text{Open}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Enclosed}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Open}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Enclosed}}{200{,}000\text{ kg}}$$

The company would report:

Enclosed	350,000 kg
Controlled release	0
Open	350,000 kg

Example 2 – A company produces the same chemical in a reagent and technical grade with the following steps.

Technical Grade Process:

$$\underset{\text{Open}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Enclosed}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Open}}{350{,}000\text{ kg}} \longrightarrow \underset{\text{Enclosed}}{200{,}000\text{ kg}}$$

Reagent Grade Process:

$$\underset{\substack{\text{Controlled}\\ \text{Release}}}{650{,}000\text{ kg}} \longrightarrow \underset{\substack{\text{Controlled}\\ \text{Release}}}{500{,}000\text{ kg}} \longrightarrow \underset{\text{Open}}{500{,}000\text{ kg}} \longrightarrow \underset{\text{Open}}{400{,}000\text{ kg}}$$

The company would report:

Enclosed	350,000 kg
Controlled release	650,000 kg
Open	850,000 kg

(The open process amount is the total of the maximum quantity in the open process category from each grade.)

Total Quantity – For items 5, 6, and 7, enter the total quantity processed in all process categories. (This total may be less than the sum of the quantities reported in individual process categories.)

WORKER-HOURS

Worker-hours may be calculated for a given process category by multiplying the average number of full-time employees needed for the operation by the number of hours operating annually. Alternatively, worker-hour information may be taken from preexisting information sources such as resource planning or budget figures.

WORKERS

In reporting number of workers for each process category, count the total number of persons directly involved in manufacturing, processing, and handling the chemical during the reporting period. Count maintenance or inspection workers only if they work with the process on a routine basis. Do not count administrative staff.

Three process categories are described in the form: enclosed, controlled release, and open. A worker should be counted as working with only one process category. If he operates several process types, count him under the one with which he spends the most time. If he spends an equal amount of time with several, count him under the most open process.

Example 3 – A company manufactured 1,000,000 kg of a chemical substance in 1980. It manufactured the chemical for all twelve months of the year and did so in an enclosed process.

In order to run the production line, ten (10) workers were present working 40 hour weeks; thus over the course of the year 20,800 worker-hours were used to run the production line.

Over the course of the year, twelve (12) different workers worked on the production of the chemical.

The form would then be filled out as follows:

Process category	Quantity (kg)	Worker-hours	Total workers
Open	0	0	0
Controlled release	0	0	0
Enclosed	1,000,000 kg	20,800	12

Example 4 – A company manufactured 1,000,000 kg of a chemical substance in 1980. It manufactured the chemical for the entire year in a 24 hour/day process consisting of three steps in the open, controlled release, and open process categories. The production line was shut down for maintenance for 2 weeks of the year. The production line had three 8-hour shifts. Each shift in step 1 required 5 workers, while 7 and 10 workers were needed per shift in steps 2 and 3, respectively. The total worker-hours required for each step follows:

Process category	(Shifts/day x hours/shift x workers x days/week x weeks/year)	Workers-hours
Open (Step 1)	(3 x 8 x 5 x 7 x 50)	42,000
Controlled (Step 2)	(3 x 8 x 7 x 7 x 50)	58,800
Open (Step 3)	(3 x 8 x 10 x 7 x 50)	84,000

Analysis of the personnel records showed that a total of 75 individuals worked on the production of the chemical during 1980. After examining the personnel records, the company was able to fill in the following table:

Process category	Total workers
Open (Step 1)	21
Controlled (Step 2)	19
Open (Step 3)	35
	75

Note that workers are not double counted or "split" even though some jobs may require moving from one step of the process to another step of the same process. An employee working on both step 1 and step 2 is counted only in step 1 if he/she spends most of his time at that step. After adding together steps in the same process category, the company would report as follows:

Process category	Quantity (kg)	Worker-hours	Total workers
Open	1,000,000	126,000	56
Controlled release	1,000,000	58,800	19
Enclosed	0	0	0

Item 4 – This item applies to the manufacture of the chemical substance and includes all steps to ready the chemical for further processing or use.

Item 5 – This item applies to use of the chemical at your plant site as a reactant in the manufacture of another chemical substance, where the molecular structure of the chemical is altered by breaking chemical bonds or making new chemical bonds between the original substance and some other substance. Report on all processing up to and including the actual reaction step and any ancillary steps which recycle unreacted chemicals back to the reactor vessel. Do not report on subsequent activities in this question.

Item 6 – Report the quantity of the chemical substance that you use on site. Examples include cleaning solvents, dielectric fluids, emulsifiers, and lubricants. Do not include any quantity that you react to make a product.

Item 7 – Report the quantity of the chemical substance that you process at the manufacturing site into products for on site use or sale. (Note that this does not include manufacture of the chemical substance; this is reported in item 4 above.) This item does include the quantity of chemical substance that you incorporate in a mixture or article. Report the steps up to and including incorporation of the chemical into an article; do not include any further processing of the article.

Item 8 – Report the quantity of the chemical substance that you prepare for commercial distribution in each of the product types in 8a to 8g. Do not include any quantity of chemical substance that your customers will further process. This will be reported in item 9.

In items 8a to 8f, report the quantity of the chemical substance in products that are for domestic use. If you are uncertain about whether your products are for domestic or foreign use, report them as domestic.

The products are divided into industrial and consumer products. "Industrial" means the manufacturing and service industries covered by the Standard Industrial Codes. Products meant to be used primarily by the general population are considered to be "consumer" products. The following definition from the Consumer Product Safety Act can be used as a guide (15 U.S.C. 2052(a)(1)): "The term 'consumer product' means any article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise." If you are uncertain about whether your products are industrial or consumer, report them as consumer.

Three types of industrial and consumer product types are described below.

"**Chemical substance or mixture**" means a chemical, or mixture containing the chemical, that is used directly by the persons using the product, e.g., cleaners, paints, inks, deodorizers, solvents, etc. This includes chemicals or mixtures in containers or other articles whose purpose is to release the chemical (e.g., cans of spray paint, ink pens, and other applicators).

"**Articles or products with no release**" are articles constructed to prevent human exposure to or release to the environment of the chemical substance during normal use and storage (e.g., chemical coatings on internal components, and chemicals inside sealed articles as in thermometers and batteries).

"**Articles or products with some release**" are articles whose material components are made of chemicals which come in direct contact with persons using the article, the atmosphere, land, or water; e.g., exposure can come from leaching, evaporation, or surface contact. This includes such articles as plastic containers, chemically treated textiles, printed paper, coated appliances, etc. If the chemical itself is sold in a bottle or other container it should be reported under "Chemical substance or mixture," not as an article. Only the container itself is an article for purposes of this form; the substance it contains is not a component of an article.

In item 8g, report the quantity of chemical substance that you export directly either as the chemical or contained in mixtures or articles.

Item 9 – Estimate the quantity of the chemical substance that your customers process for each of the uses listed in items 9a to 9h. (Do not include the quantity of chemical substances that your customers will use without further processing; that quantity should be reported in item 8a or 8d.)

For items 9a to 9g, follow the same directions as for items 8a to 8g.

For item 9h, report the quantity of chemical substance that your customers will react to make products that do not contain the chemical substance itself.

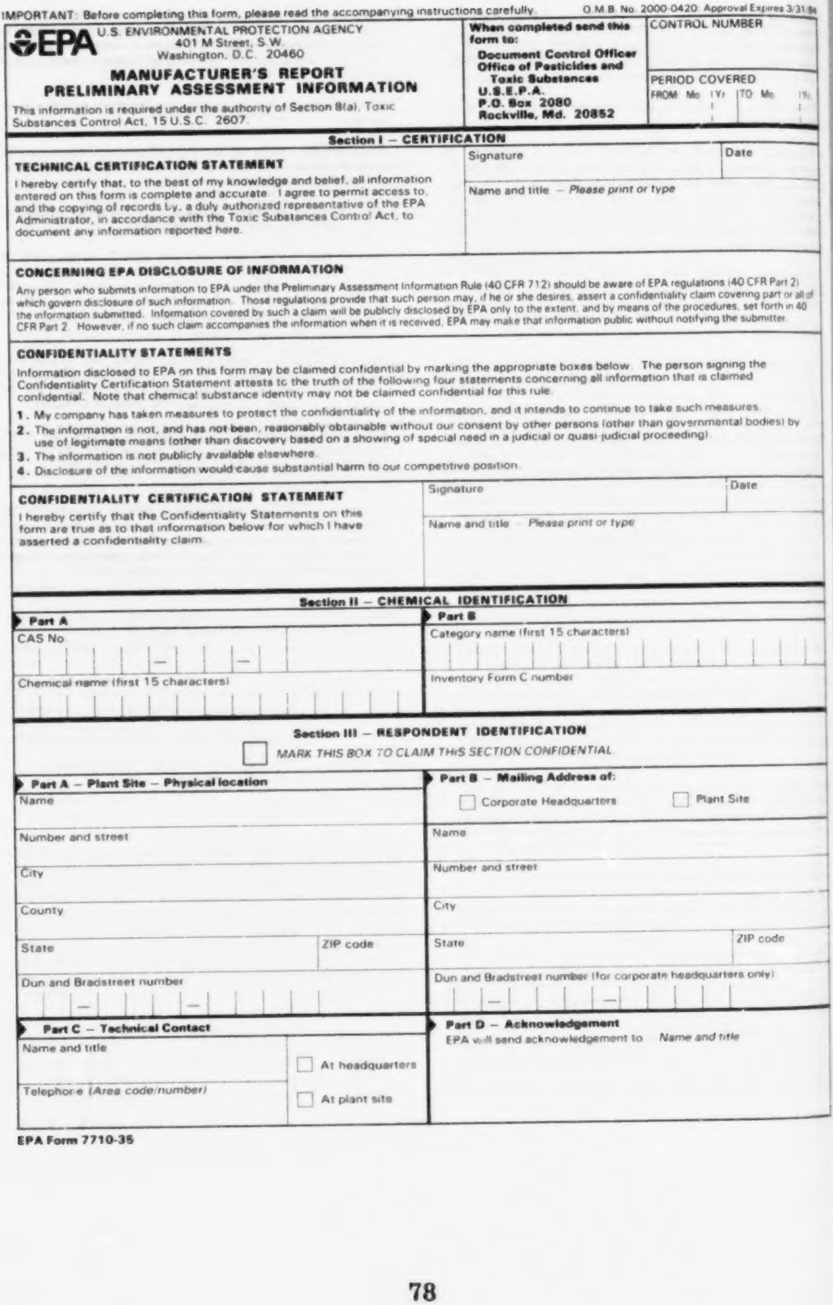
For item 9i, report the quantity of chemical substance for which your customers' uses are unknown.

Report your best estimate for items 9a to 9h within ±50%. If you cannot estimate an item to this degree of accuracy, include the quantity in item 9i. You may report "unknown" if the data would reveal information subject to a confidentiality agreement between you and your customers.

Item 10 – If you report your customers' uses as unknown (item 9i above) for more than 20% of the total quantity that you manufacture and import (items 1 and 2 above) list the names under which you distribute the chemical substance.

This item will allow EPA, if necessary, to find out about chemical uses you have reported as "unknown" by requiring processors of your products to report directly to us.

Item 11 – This item addresses your general knowledge of the process types your customers use to process the chemical. Estimate the quantity of the chemical that your customers process in each of the three process categories. Specify "unknown" if you do not know to within ±50%.



IMPORTANT: Before completing this form, please read the accompanying instructions carefully. O.M.B. No. 2000-0420: Approval Expires 3/31/84

EPA U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
Washington, D.C. 20460

MANUFACTURER'S REPORT
PRELIMINARY ASSESSMENT INFORMATION

This information is required under the authority of Section 8(a), Toxic Substances Control Act, 15 U.S.C. 2607.

When completed send this form to:

Document Control Officer
Office of Pesticides and Toxic Substances
U.S.E.P.A.
P.O. Box 2080
Rockville, Md. 20852

CONTROL NUMBER

PERIOD COVERED
FROM: Mo | Yr | TO: Mo | Yr

Section I — CERTIFICATION

TECHNICAL CERTIFICATION STATEMENT

I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate. I agree to permit access to, and the copying of records by, a duly authorized representative of the EPA Administrator, in accordance with the Toxic Substances Control Act, to document any information reported here.

Signature

Date

Name and title — *Please print or type*

CONCERNING EPA DISCLOSURE OF INFORMATION

Any person who submits information to EPA under the Preliminary Assessment Information Rule (40 CFR 712) should be aware of EPA regulations (40 CFR Part 2) which govern disclosure of such information. Those regulations provide that such person may, if he or she desires, assert a confidentiality claim covering part or all of the information submitted. Information covered by such a claim will be publicly disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 CFR Part 2. However, if no such claim accompanies the information when it is received, EPA may make that information public without notifying the submitter.

CONFIDENTIALITY STATEMENTS

Information disclosed to EPA on this form may be claimed confidential by marking the appropriate boxes below. The person signing the Confidentiality Certification Statement attests to the truth of the following four statements concerning all information that is claimed confidential. Note that chemical substance identity may not be claimed confidential for this rule.

1. My company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
2. The information is not, and has not been, reasonably obtainable without our consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).
3. The information is not publicly available elsewhere.
4. Disclosure of the information would cause substantial harm to our competitive position.

CONFIDENTIALITY CERTIFICATION STATEMENT

I hereby certify that the Confidentiality Statements on this form are true as to that information below for which I have asserted a confidentiality claim.

Signature

Date

Name and title — *Please print or type*

Section II — CHEMICAL IDENTIFICATION

Part A

CAS No. — —

Chemical name (first 15 characters)

Part B

Category name (first 15 characters)

Inventory Form C number

Section III — RESPONDENT IDENTIFICATION

☐ *MARK THIS BOX TO CLAIM THIS SECTION CONFIDENTIAL*

Part A — Plant Site — Physical location

Name

Number and street

City

County

State

ZIP code

Dun and Bradstreet number — —

Part B — Mailing Address of:

☐ Corporate Headquarters ☐ Plant Site

Name

Number and street

City

State

ZIP code

Dun and Bradstreet number (for corporate headquarters only) — —

Part C — Technical Contact

Name and title

Telephone (*Area code/number*)

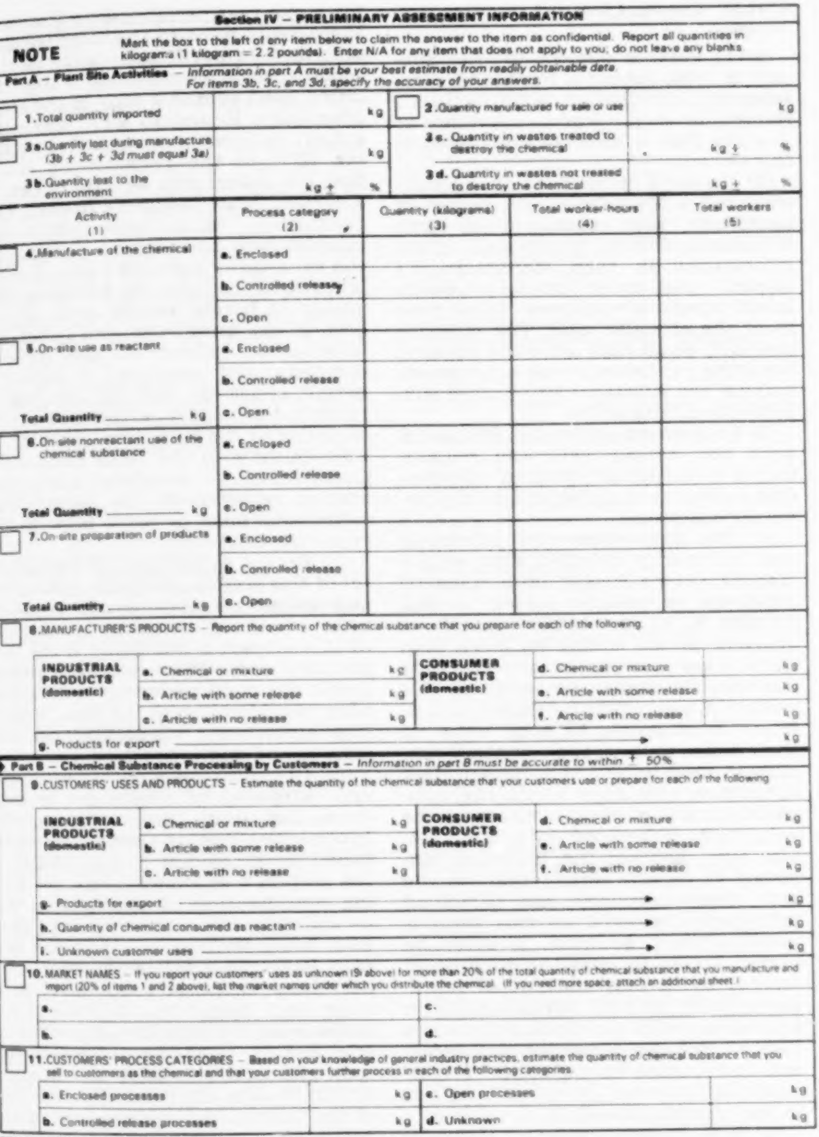
☐ At headquarters

☐ At plant site

Part D — Acknowledgement

EPA will send acknowledgement to *Name and title*

EPA Form 7710-35



Section IV — PRELIMINARY ASSESSMENT INFORMATION

NOTE Mark the box to the left of any item below to claim the answer to the item as confidential. Report all quantities in kilograms (1 kilogram = 2.2 pounds). Enter N/A for any item that does not apply to you; do not leave any blanks.

Part A — Plant Site Activities — *Information in part A must be your best estimate from readily obtainable data. For items 3b, 3c, and 3d, specify the accuracy of your answers.*

☐ **1.** Total quantity imported	kg	☐ **2.** Quantity manufactured for sale or use	kg
☐ **3a.** Quantity lost during manufacture *(3b + 3c + 3d must equal 3a)*	kg	**3c.** Quantity in wastes treated to destroy the chemical	kg ± %
3b. Quantity lost to the environment	kg ± %	**3d.** Quantity in wastes not treated to destroy the chemical	kg ± %

Activity (1)	Process category (2)	Quantity (kilograms) (3)	Total worker-hours (4)	Total workers (5)
☐ **4.** Manufacture of the chemical	**a.** Enclosed			
	b. Controlled release			
	c. Open			
☐ **5.** On-site use as reactant	**a.** Enclosed			
	b. Controlled release			
Total Quantity ______ kg	**c.** Open			
☐ **6.** On-site nonreactant use of the chemical substance	**a.** Enclosed			
	b. Controlled release			
Total Quantity ______ kg	**c.** Open			
☐ **7.** On-site preparation of products	**a.** Enclosed			
	b. Controlled release			
Total Quantity ______ kg	**c.** Open			

☐ **8.** MANUFACTURER'S PRODUCTS — Report the quantity of the chemical substance that you prepare for each of the following.

INDUSTRIAL PRODUCTS (domestic)	**a.** Chemical or mixture	kg	**CONSUMER PRODUCTS (domestic)**	**d.** Chemical or mixture	kg
	b. Article with some release	kg		**e.** Article with some release	kg
	c. Article with no release	kg		**f.** Article with no release	kg

g. Products for export → kg

Part B — Chemical Substance Processing by Customers — *Information in part B must be accurate to within ± 50%*

☐ **9.** CUSTOMERS' USES AND PRODUCTS — Estimate the quantity of the chemical substance that your customers use or prepare for each of the following.

INDUSTRIAL PRODUCTS (domestic)	**a.** Chemical or mixture	kg	**CONSUMER PRODUCTS (domestic)**	**d.** Chemical or mixture	kg
	b. Article with some release	kg		**e.** Article with some release	kg
	c. Article with no release	kg		**f.** Article with no release	kg

g. Products for export → kg

h. Quantity of chemical consumed as reactant → kg

i. Unknown customer uses → kg

☐ **10.** MARKET NAMES — If you report your customers' uses as unknown (9i above) for more than 20% of the total quantity of chemical substance that you manufacture and import (20% of items 1 and 2 above), list the market names under which you distribute the chemical. (If you need more space, attach an additional sheet.)

a.	**c.**
b.	**d.**

☐ **11.** CUSTOMERS' PROCESS CATEGORIES — Based on your knowledge of general industry practices, estimate the quantity of chemical substance that you sell to customers as the chemical and that your customers further process in each of the following categories.

a. Enclosed processes	kg	**c.** Open processes	kg
b. Controlled release processes	kg	**d.** Unknown	kg

EPA Form 7710-35

[47 FR 26998, June 22, 1982, as amended at 52 FR 20083, May 29, 1987; 53 FR 12523, Apr. 15, 1988]

§ 712.30 Chemical lists and reporting periods.

(a)(1) Persons subject to this Subpart B must submit a Preliminary Assessment Information Manufacturer's Report for each chemical substance or mixture that is listed or designated in this section.

(2) Unless a respondent has already prepared a Manufacturer's Report in conformity with conditions set forth in paragraph (a)(3) of this section, the information in each Manufacturer's Report must cover the respondent's latest complete corporate fiscal year as of the effective date. The effective date will be 30 days after the Federal Register publishes a rule amendment making the substance or mixture subject to this Subpart B.

(3) Persons subject to this Subpart B need not comply with the requirements of paragraph (a)(2) of this section if they meet either one of the following conditions:

(i) The respondent has previously and voluntarily provided EPA with a Manufacturer's Report on a chemical substance or mixture subject to this Subpart B, which contains data for a one-year period ending no more than three years prior to the effective date described in paragraph (a)(2) of this section. Respondents meeting this condition must notify EPA by letter of their desire to have the voluntary submission used in lieu of a current data submission and must verify the completeness and current accuracy of the voluntarily submitted data. Such letters must contain the following language: "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate. I agree to permit access to, and the copying of records by, a duly authorized representative of the EPA Administrator, in accordance with the Toxic Substances Control Act, to document any information reported on the form." Notification letters must be submitted prior to the reporting deadline.

(ii) The respondent has previously submitted a Manufacturer's Report on a chemical substance or mixture subject to this Subpart B to the Interagency Testing Committee, but not to EPA, and that Report contained data
for a one-year period ending less
three years prior to the effective
described in paragraph (a)(2) of
section. Respondents meeting this
dition must submit a copy of the
ufacturer's Report to EPA, and
submit an accompanying letter no
ing EPA of the respondent's in
that the submission be used in lie
a current Manufacturer's Report.
notification letter must verify
completeness and current accura
the voluntarily submitted data. Su
letter must contain the following
guage: "I hereby certify that, to
best of my knowledge and belie
information entered on this for
complete and accurate. I agre
permit access to, and the copyin
records by, a duly authorized r
sentative of the EPA Administrat
accordance with the Toxic Subst
Control Act, to document any
mation reported on the form."
submission must be made prior t
reporting deadline.

(b) Except as provided in parag
(c) of this section, chemical subst
and designated mixtures will be a
after a notice of proposed amend
of this subpart is published in the
eral Register. There will be a 3
public comment period on each n
after consideration of the comme
final amendment will identify the
stances and mixtures added.

(c) Chemical substances, mixt
and categories of substances or
tures that have been added by
Interagency Testing Committee,
lished under section 4(e) of TSC
the section 4(e) Priority List, for
ing consideration by the Agency
be added to this section 30 days
EPA issues for publication in the
eral Register a rule amendmen
ing these chemical substances,
tures and categories. A Prelim
Assessment Information—Manuf
er's Report must be submitte
each chemical substance and mi
within 60 days after the effectiv
of the listing. At the discretion
Assistant Administrator for Pest
and Toxic Substances, a listed
stance, mixture or category m
withdrawn, for good cause, fro
rule's reporting requirements p
the effective date. Any inform

submitted showing why a substance, mixture or category should be removed from the rule must be received by EPA within 14 days after the date of publication of the notice under this paragraph. If a substance, mixture or category is removed, a FEDERAL REGISTER notice announcing this decision will be published no later than the effective date of the amendment. Any information submitted must be addressed to: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, ATTN: 8(a) Auto-ITC.

(d) A Preliminary Assessment Information Manufacturer's Report must be submitted by November 19, 1982 for each chemical substance listed below.

CAS No.	Chemical Name
64-67-5	Sulfuric acid, diethyl ester
71-55-6	Ethane, 1,1,1-trichloro-
72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt
74-87-3	Methane, chloro-
75-05-8	Acetonitrile
75-09-2	Methane, dichloro-
75-12-7	Formamide
75-21-8	Oxirane
75-38-7	Ethene, 1,1-difluoro-
75-56-9	Oxirane, methyl-
77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
77-78-1	Sulfuric acid, dimethyl ester
77-83-8	Oxiranecarboxylic acid, 3-methyl-3-phenyl-, ethyl ester
78-30-8	Phosphoric acid, tris(2-methylphenyl) ester
78-32-0	Phosphoric acid, tris(4-methylphenyl) ester
78-33-1	Phenol, 4-(1,1-dimethylethyl)-, phosphate (3:1)
78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-
78-87-5	Propane, 1,2-dichloro-
78-93-3	2-Butanone
79-06-1	2-Propenamide
80-62-6	2-Propenoic acid, 2-methyl-, methyl ester
81-21-0	2,4-Methano-2H-indeno[1,2-b:5,6-b']bisoxirene, octahydro-
84-61-7	1,2-Benzenedicarboxylic acid, dicyclohexyl ester
84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester
85-70-1	1,2-Benzenedicarboxylic acid, 2-butoxy-2-oxoethyl butyl ester
87-61-6	Benzene, 1,2,3-trichloro-
87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
88-74-4	Benzenamine, 2-nitro-
89-63-4	Benzenamine, 4-chloro-2-nitro-
90-13-1	Naphthalene, 1-chloro-
92-49-9	Benzenamine, N-(2-chloroethyl)-N-ethyl-
92-52-4	1,1'-Biphenyl
95-39-6	2-Propenoic acid, bicyclo[2.2.1]hept-5-en-2-ylmethyl ester
95-47-6	Benzene, 1,2-dimethyl-
95-48-7	Phenol, 2-methyl-
95-49-8	Benzene, 1-chloro-2-methyl-
95-50-1	Benzene, 1,2-dichloro-
95-51-2	Benzenamine, 2-chloro-
95-54-5	1,2-Benzenediamine
95-63-6	Benzene, 1,2,4-trimethyl-
95-76-1	Benzenamine, 3,4-dichloro-
95-82-9	Benzenamine, 2,5-dichloro-
95-94-3	Benzene, 1,2,4,5-tetrachloro-
96-05-9	2-Propenoic acid, 2-methyl-, 2-propenyl ester
96-08-2	7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(2-methyloxiranyl)-
96-09-3	Oxirane, phenyl-
96-12-8	Propane, 1,2-dibromo-3-chloro-
96-33-3	2-Propenoic acid, methyl ester
97-02-9	Benzenamine, 2,4-dinitro-
97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
97-86-9	2-Propenoic acid, 2-methyl-, 2-methylpropyl ester
97-88-1	2-Propenoic acid, 2-methyl-, butyl ester
97-90-5	2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester
98-07-7	Benzene, (trichloromethyl)-
98-87-3	Benzene, (dichloromethyl)-
98-88-4	Benzoyl chloride
98-95-3	Benzene, nitro-
99-09-2	Benzenamine, 3-nitro-
99-30-9	Benzenamine, 2,6-dichloro-4-nitro-
99-56-9	1,2-Benzenediamine, 4-nitro-
100-01-6	Benzenamine, 4-nitro-
100-41-4	Benzene, ethyl-
100-42-5	Benzene, ethenyl-
100-44-7	Benzene, (chloromethyl)-
101-43-9	2-Propenoic acid, 2-methyl-, cyclohexyl ester
101-77-9	Benzenamine, 4,4'-methylenebis-
101-90-6	Oxirane, 2,2'-[1,3-phenylenebis(oxymethylene)]bis-
103-11-7	2-Propenoic acid, 2-ethylhexyl ester
103-71-9	Benzene, isocyanato-
105-16-8	2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester
106-40-1	Benzenamine, 4-bromo-
106-42-3	Benzene, 1,4-dimethyl-
106-44-5	Phenol, 4-methyl-
106-46-7	Benzene, 1,4-dichloro-
106-47-8	Benzenamine, 4-chloro-
106-50-3	1,4-Benzenediamine
106-51-4	2,5-Cyclohexadiene-1,4-dione
106-63-8	2-Propenoic acid, 2-methylpropyl ester
106-71-8	2-Propenoic acid, 2-cyanoethyl ester
106-74-1	2-Propenoic acid, 2-ethoxyethyl ester
106-83-2	Oxiraneoctanoic acid, 3-octyl-, butyl ester
106-84-3	Oxiraneoctanoic acid, 3-octyl-, octyl ester
106-87-6	7-Oxabicyclo[4.1.0]heptane, 3-oxiranyl-
106-88-7	Oxirane, ethyl-
106-89-8	Oxirane, (chloromethyl)-
106-90-1	2-Propenoic acid, oxiranylmethyl ester
106-91-2	2-Propenoic acid, 2-methyl-, oxiranylmethyl ester
106-92-3	Oxirane, [(2-propenyloxy)methyl]-
108-10-1	2-Pentanone, 4-methyl-
108-31-6	2,5-Furandione
108-38-3	Benzene, 1,3-dimethyl-
108-39-4	Phenol, 3-methyl-
108-42-9	Benzenamine, 3-chloro-
108-45-2	1,3-Benzenediamine
108-70-3	Benzene, 1,3,5-trichloro-
108-88-3	Benzene, methyl-
108-90-7	Benzene, chloro-
108-94-1	Cyclohexanone
109-16-0	2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester

CAS No.	Chemical Name
110-86-1	Pyridine
111-40-0	1,2-Ethanediamine, N-(2-aminoethyl)-
114-49-8	Benzeneacetic acid, .alpha.-(hydroxymethyl)-, 9-methyl-3-oxa-9-azatricyclo[3.3.1.02,4]non-7-yl ester, hydrobromide, [7(S)-(1.alpha.,2.beta.,4.beta.,5.alpha.,7.beta.)]-
115-27-5	4,7-Methanoisobenzofuran-1,3-dione, 4,5,6,7,8,8-hexachloro-3a,4,7,7a-tetrahydro-
115-28-6	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, 1,4,5,6,7,7-hexachloro-
115-86-6	Phosphoric acid, triphenyl ester
116-15-4	1-Propene, 1,1,2,3,3,3-hexafluoro-
117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
118-79-6	Phenol, 2,4,6-tribromo-
119-06-2	1,2-Benzenedicarboxylic acid, ditridecyl ester
119-07-3	1,2-Benzenedicarboxylic acid, decyl octyl ester
120-82-1	Benzene, 1,2,4-trichloro-
121-39-1	Oxiranecarboxylic acid, 3-phenyl-, ethyl ester
121-45-9	Phosphorous acid, trimethyl ester
121-87-9	Benzenamine, 2-chloro-4-nitro-
122-07-6	Ethanamine, 2,2-dimethoxy-N-methyl-
122-60-1	Oxirane, (phenoxymethyl)-
123-31-9	1,4-Benzenediol
126-99-8	1,3-Butadiene, 2-chloro-
131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
140-08-9	Ethanol, 2-chloro-, phosphite (3:1)
140-88-5	2-Propenoic acid, ethyl ester
141-32-2	2-Propenoic acid, butyl ester
141-38-8	Oxiraneoctanoic acid, 3-octyl-, 2-ethylhexyl ester
141-85-5	Benzenamine, 3-chloro-, hydrochloride
142-04-1	Benzenamine, hydrochloride
142-09-6	2-Propenoic acid, 2-methyl-, hexyl ester
142-90-5	2-Propenoic acid, 2-methyl-, dodecyl ester
145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
147-82-0	Benzenamine, 2,4,6-tribromo-
155-41-9	3-Oxa-9-azoniatricyclo[3.3.1.02,4]nonane, 7-(3-hydroxy-1-oxo-2-phenyl- propoxy)-9,9-dimethyl-, bromide, [7(S)-(1.alpha.,2.beta.,4.beta.,5. alpha.,7.beta.)]-
285-67-6	6-Oxabicyclo[3.1.0]hexane
286-20-4	7-Oxabicyclo[4.1.0]heptane
428-59-1	Oxirane, trifluoro(trifluoromethyl)-
470-67-7	7-Oxabicyclo[2.2.1]heptane, 1-methyl-4-(1-methylethyl)-
496-72-0	1,2-Benzenediamine, 4-methyl-
534-15-6	Ethane, 1,1-dimethoxy-
541-73-1	Benzene, 1,3-dichloro-
554-00-7	Benzenamine, 2,4-dichloro-
556-52-5	Oxiranemethanol
593-60-2	Ethene, bromo-
603-35-0	Phosphine, triphenyl-
608-27-5	Benzenamine, 2,3-dichloro-
608-93-5	Benzene, pentachloro-
615-05-4	1,3-Benzenediamine, 4-methoxy-
624-18-0	1,4-Benzenediamine, dihydrochloride
626-43-7	Benzenamine, 3,5-dichloro-
632-79-1	1,3-Isobenzofurandione, 4,5,6,7-tetrabromo-
634-66-2	Benzene, 1,2,3,4-tetrachloro-
634-90-2	Benzene, 1,2,3,5-tetrachloro-
634-93-5	Benzenamine, 2,4,6-trichloro-
635-22-3	Benzenamine, 4-chloro-3-nitro-
688-84-6	2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester
689-12-3	2-Propenoic acid, 1-methylethyl ester
818-61-1	2-Propenoic acid, 2-hydroxyethyl ester
823-40-5	1,3-Benzenediamine, 2-methyl-
827-94-1	Benzenamine, 2,6-dibromo-4-nitro-
868-77-9	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester
925-60-0	2-Propenoic acid, propyl ester
930-37-0	Oxirane, (methoxymethyl)-
1139-30-6	5-Oxatricyclo[8.2.0.04,6]dodecane, 4,12,12 methyl-9-methylene-, [((1R*,4R*,6R*,10S*)]-
1241-94-7	Phosphoric acid, 2-ethylhexyl diphenyl
1309-64-4	Antimony oxide O3Sb2
1319-77-3	Phenol, methyl-
1321-64-8	Naphthalene, pentachloro-
1321-65-9	Naphthalene, trichloro-
1330-20-7	Benzene, dimethyl-
1330-61-6	2-Propenoic acid, isodecyl ester
1330-78-5	Phosphoric acid, tris(methylphenyl) ester
1335-87-1	Naphthalene, hexachloro-
1335-88-2	Naphthalene, tetrachloro-
1345-04-6	Antimony sulfide S3Sb2
1464-53-5	2,2'-Bioxirane
1663-39-4	2-Propenoic acid, 1,1-dimethylethyl ester
1817-73-8	Benzenamine, 2-bromo-4,6-dinitro-
1937-37-7	2,7-Naphthalenedisulfonic acid, 4-amin [[4'-[(2,4-diaminophenyl)azo]-1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenyla , disodium salt
2082-81-7	2-Propenoic acid, 2-methyl-, 1,4-butane ester
2156-96-9	2-Propenoic acid, decyl ester
2210-28-8	2-Propenoic acid, 2-methyl-, propyl ester
2223-82-7	2-Propenoic acid, 2,2-dimethyl-1,3-propane ester
2234-13-1	Naphthalene, octachloro-
2238-07-5	Oxirane, 2,2'-[oxybis(methylene)]bis-
2358-84-1	2-Propenoic acid, 2-methyl-, oxydi-2,1-etha diyl ester
2425-79-8	Oxirane, 2,2'-[butanediylbis(oxymethylene)]bis-
2426-08-6	Oxirane, (butoxymethyl)-
2426-54-2	2-Propenoic acid, 2-(diethylamino)ethyl e
2455-24-5	2-Propenoic acid, 2-methyl-, (tetrahyd furanyl)methyl ester
2461-18-9	Oxirane, [(dodecyloxy)methyl]-
2499-95-8	2-Propenoic acid, hexyl ester
2528-36-1	Phosphoric acid, dibutyl phenyl ester
2530-85-0	2-Propenoic acid, 2-methyl-, (trimethoxysilyl)propyl ester
2602-46-2	2,7-Naphthalenedisulfonic acid, 3,3'-[[1,1 phenyl]-4,4'-diylbis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt
2610-05-1	1,3-Naphthalenedisulfonic acid, 6,6'-[(3,3 methoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-5-hydroxy-, tet dium salt
2687-25-4	1,2-Benzenediamine, 3-methyl-
2855-19-8	Oxirane, decyl-
2867-47-2	2-Propenoic acid, 2-methyl-, (dimethylamino)ethyl ester
2905-65-9	Benzoic acid, 3-chloro-, methyl ester
3076-04-8	2-Propenoic acid, tridecyl ester
3083-25-8	Oxirane, (2,2,2-trichloroethyl)-
3132-64-7	Oxirane, (bromomethyl)-
3194-55-6	Cyclododecane, 1,2,5,6,9,10-hexabromo-
3775-90-4	2-Propenoic acid, 2-methyl-, 2-[(dimethylethyl)amino]ethyl ester
3953-10-4	2-Propenoic acid, 2-ethylbutyl ester
4016-11-9	Oxirane, (ethoxymethyl)-
4016-14-2	Oxirane, [(1-methylethoxy)methyl]-
4835-11-4	1,6-Hexanediamine, N,N'-dibutyl-
5388-62-5	Benzenamine, 4-chloro-2,6-dinitro-
5455-98-1	1H-Isoindole-1,3(2H)-dione, 2-(oxiranylme
5536-61-8	2-Propenoic acid, 2-methyl-, sodium salt
6033-05-2	Morphinan-3,6-diol, 7,8-didehydro-4,5-ep 17-methyl- (5.alpha.,6.alpha.)-, (Z)-9-oc cenoate (salt)

CAS No.	Chemical Name
6106-46-3	Benzeneacetic acid, .alpha.-(hydroxymethyl)-, 9-methyl-3-oxa-9-azatricyclo[3.3.1.02,4]non-7-yl ester, [7(S)-(1.alpha.,2.beta.,4.beta.,5.alpha.,7. beta.)]-, compd. with methyl nitrate (1:1)
6106-81-6	Benzeneacetic acid, .alpha.-(hydroxymethyl)-, 9-methyl-3-oxa-9-azatricyclo[3.3.1.02,4]non-7-yl ester, N-oxide, hydrobromide, [7(S)-(1.alpha.,2.beta.,4.beta.,5.alpha.,7. beta.)]-
6283-25-6	Benzenamine, 2-chloro-5-nitro-
6369-59-1	1,4-Benzenediamine, 2-methyl-, sulfate
7320-37-8	Oxirane, tetradecyl-
7440-36-0	Antimony
7446-81-3	2-Propenoic acid, sodium salt
7534-94-3	2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-
13048-33-4	2-Propenoic acid, 1,6-hexanediyl ester
13236-02-7	Oxirane, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)] tris-
13561-08-5	Oxirane, 2,2'-[[2-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bis-
16110-89-7	Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-
16715-83-6	2-Propenoic acid, 2-methyl-, 2-[bis(1-methylethyl)amino]ethyl ester
17256-39-2	2-Propanamine, 1-chloro-N,N-dimethyl-, hydrochloride
17977-09-2	2-Propenoic acid, 2,2-dinitropropyl ester
24442-57-7	Ethanol, 1,2-dibromo-, acetate
25085-99-8	Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer
25134-21-8	4,7-Methanoisobenzofuran-1,3-dione, 3a,4,7,7a-tetrahydromethyl-
25155-23-1	Phenol, dimethyl-, phosphate (3:1)
25550-14-5	Benzene, ethylmethyl-
25584-83-2	2-Propenoic acid, monoester with 1,2-propanediol
25637-99-4	Cyclododecane, hexabromo-
26444-49-5	Phosphoric acid, methylphenyl diphenyl ester
26447-14-3	Oxirane, [(methylphenoxy)methyl]-
26761-40-0	1,2-Benzenedicarboxylic acid, diisodecyl ester
26761-45-5	Neodecanoic acid, oxiranylmethyl ester
29761-21-5	Phosphoric acid, isodecyl diphenyl ester
32360-05-7	2-Propenoic acid, 2-methyl-, octadecyl ester
33791-58-1	2-Propenoic acid, 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl ester
37853-59-1	Benzene, 1,1'-[1,2-ethanediylbis(oxy)]bis[2,4,6-tribromo-
51363-64-5	Phosphoric acid, diisodecyl phenyl ester
56803-37-3	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester
66108-37-0	Phosphoric acid, 2,2-bis(bromomethyl)-3-chloropropyl bis[2-chloro-1-(chloromethyl)ethyl] ester

(e) A Preliminary Assessment Information Manufacturer's Report must be submitted by November 19, 1982 on confidential chemicals in the following categories. A chemical is confidential only if EPA upheld the respondent's claim of confidential identity for the TSCA Chemical Substance Inventory:

Alkyl phthalates—all alkyl esters of 1,2-benzene dicarboxylic acid (orthophthalic acid).

Aryl phosphates—phosphate esters of phenol or of alkyl-substituted phenols. Tri-aryl and mixed alkyl and aryl esters are included but tri-alkyl esters are excluded.

Glycidol derivatives—C_2H_3O-CH_2O-R where R is an alkyl, alkenyl, alkynyl, aryl, or acyl group. Any substituent or functional group may be present on the alkyl, etc. groups.

(f) A Preliminary Assessment Information Manufacturer's Report must be submitted by August 17, 1983, for each chemical substance listed below.

CAS No.	Chemical Name
67-72-1	Ethane, hexachloro-
75-02-5	Ethene, fluro-
95-70-5	1,4-Benzenediamine, 2-methyl-
95-80-7	1,3-Benzenediamine, 4-methyl-
95-83-0	1,2-Benzenediamine, 4-chloro-
98-56-6	Benzene, 1-chloro-4-(trifluoromethyl)-
108-71-4	1,3-Benzenediamine, 5-methyl-
116-14-3	Ethene, tetrafluoro-
137-09-7	Phenol, 2,4-diamino-dihydrochloride
359-11-5	Ethene, trifluoro-
541-69-5	1,3-Benzenediamine dihydrochloride
541-70-8	1,3-Benzenediamine, sulfate (1:1)
614-94-8	1,3-Benzenediamine, 4-methoxy-, dihydrochloride
615-28-1	1,2-Benzenediamine, dihydrochloride
615-45-2	1,4-Benzenediamine, 2-methyl-, dihydrochloride
615-46-3	1,4-Benzenediamine, 2-chloro-, dihydrochloride
615-50-9	1,4-Benzenediamine, 2-methyl-, sulfate (1:1)
677-21-4	1-Propene, 3,3,3-trifluoro-
1197-37-1	1,2-Benzenediamine, 4-ethoxy-
1477-55-0	1,3-Benzenedimethanamine
3663-23-8	Benzenediamine, 4-butyl-
5042-55-7	1,3-Benzenediamine, 5-nitro-
5131-58-8	1,3-Benzenediamine, 4-nitro-
5131-60-2	1,3-Benzenediamine, 4-chloro-
5307-02-8	1,4-Benzenediamine, 2-methoxy-.
5307-14-2	1,4-Benzenediamine, 2-nitro-
6219-67-6	1,3-Benzenediamine, 4-methoxy-, sulfate
6219-71-2	1,4-Benzenediamine, 2-chloro-, sulfate
6219-77-8	1,2-Benzenediamine, 4-nitro-, dihydrochloride
15872-73-8	Phenol, 2,4-diamino-6-methyl-
16245-77-5	1,4-Benzenediamine, sulfate (1:1)
18266-52-9	1,4-Benzenediamine, 2-nitro-, dihydrochloride
20103-09-7	1,4-Benzenediamine, 2,5-dichloro-
25376-45-8	Benzenediamine, ar-methyl-
39156-41-7	1,3-Benzenediamine, 4-methoxy-, sulfate (1:1)
42389-30-0	1,2-Benzenediamine, 5-chloro-3-nitro-
62654-17-5	1,4-Benzenediamine, ethanedioate (1:1)
65879-44-9	Phenol, 2,4-diamino-6-methyl-, hydrochloride
66422-95-5	Ethanol, 2-(2,4-diaminophenoxy)-, dihydrochloride
67801-06-3	1,3-Benzenediamine, 4-ethoxy-, dihydrochloride
68015-98-5	1,3-Benzenediamine, 4-ethoxy-, sulfate (1:1)
68239-80-5	1,3-Benzenediamine, 4-chloro-, sulfate (1:1)
68239-82-7	1,2-Benzenediamine, 4-nitro-, sulfate (1:1)
68239-83-8	1,4-Benzenediamine, 2-nitro-, sulfate (1:1)
68459-98-3	1,2-Benzenediamine, 4-chloro-, sulfate (1:1)
68966-84-7	1,3-Benzenediamine, ar-ethyl-ar-methyl-

(g) A Preliminary Assessment Information Manufacturer's Report must be submitted by October 8, 1984, for each chemical substance listed below.

CAS No.	Chemical Name
77-58-7	Stannane, dibutylbis[(1-oxododecyl)oxy]-
108-67-8	Benzene, 1,3,5-trimethyl-
140-66-9	Phenol, 4-(1,1,3,3-tetramethylbutyl)-
526-73-8	Benzene, 1,2,3-trimethyl-
646-06-0	1,3-Dioxolane
1185-81-5	Stannane, dibutylbis(dodecylthio)-
3319-31-1	1,2,4-Benzenetricarboxylic acid, tris (2-ethylhexyl) ester
6422-86-2	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
13414-54-5	Benzene, 1-[(2-methyl-2-propenyl)oxy]-2-nitro-
13414-55-6	Benzofuran, 2,3-dihydro-2,2-dimethyl-7-nitro-
25168-21-2	2-Butenoic acid, 4,4′-[(dibutylstannylene)=bis(oxy)] bis [(4-oxo-, diisooctyl ester, (Z,Z)-
25168-24-5	Acetic acid, 2,2′-[(dibutylstannylene)bis(thio)]bis-,diisooctyl ester
25551-13-7	Benzene, trimethyl-
25852-70-4	Acetic acid, 2,2′,2″-[(butylstannylidyne)=tris(thio)]tris-, triisooctyl ester
26636-01-1	Acetic acid, 2,2′-[(dimethylstannylene)bis(thio)]bis-,diisooctyl ester
54849-38-6	Acetic acid, 2,2′,2″-[(methylstannylidyne)=tris(thio)]tris-, triisooctyl ester
68298-46-4	7-Benzofuranamine, 2,3-dihydro-2,2-dimethyl-

(h) A Preliminary Assessment Information Manufacturer's Report must be submitted by September 20, 1983 for each chemical substance listed below.

CAS No.	Chemical name
122-99-6	2-Phenoxyethanol.
1000-82-4	Methylolurea.
61789-36-4	Calcium naphthenate.
61789-51-3	Cobalt naphthenate.
61790-14-5	Lead naphthenate.

(i) Manufacturers of the chemical substance listed below must submit a Preliminary Assessment Information Manufacturer's Report on that chemical substance by October 8, 1984:

CAS No.	Name
141-79-7	Mesityl Oxide.

(j) A Preliminary Assessment Information Manufacturer's Report must be submitted by March 13, 1984 for each chemical substance listed below.

CAS No.	Chemical name
111-21-7	Ethylene bis(oxyethylene) diacetate
112-90-3	Oleylamine
124-17-4	2-(2-Butoxyethoxy) ethyl acetate
3389-71-7	1,2,3,4,7,7-Hexachloronorbornadiene

(k) A Preliminary Assessment Information Manufacturer's Report must be submitted by August 27, 1984 for each chemical substance listed below.

CAS No.	Name
80-05-7	Bisphenol A.
149-57-5	2-Ethylhexanoic acid.
3322-93-8	1,2-Dibromo-4-(1,2-dibromoethyl) cyclohexane
25640-78-2	Isopropyl biphenyl.
69009-90-1	Diisopropyl biphenyl.

(l) A Preliminary Assessment Information Manufacturer's Report must be submitted by July 8, 1985 for the following chemical:

CAS No.	Name
328-84-7	3,4-dichlorobenzotrifluoride.

(m) A Preliminary Assessment Information Manufacturer's Report must be submitted by February 26, 1985, for each chemical substance listed below.

CAS No.	Name
84-65-1	Anthraquinone.
85-22-3	Pentabromoethylbenzene.
98-82-8	Cumene.
126-99-8	2-Chloro-1,3-butadiene (Chloroprene).
137-20-2	Sodium N-methyl-N-oleoyltaurine.
149-30-4	Mercaptobenzothiazole.
556-67-2	Octamethylcyclotetrasiloxane.

(n) A Preliminary Assessment Information Manufacturer's Report must be submitted by August 1, 1985, for each chemical substance listed in this paragraph.

CAS No.	Name
9011-05-6	Urea, polymer with formaldehyde.
68611-64-3	Urea, reaction product with formaldehyde.

(o) A Preliminary Assessment Information Manufacturer's Report must be submitted by August 19, 1985, for each chemical substance listed below.

AS No.	Name
96-37-7	Methylcyclopentane.
79-94-7	Tetrabromobisphenol A.
112-35-6	Triethylene glycol monomethyl ether.
112-50-5	Triethylene glycol monoethyl ether.
143-22-6	Triethylene glycol monobutyl ether.

(p) A Preliminary Assessment Infor- ation Manufacturer's Report must e submitted by February 18, 1986, for ach chemical substance listed below.

CAS No.	Name
110-82-7	Cyclohexane.
128-39-2	2,6-Di-tert-butyl phenol.
25550-98-5	Diisodecyl phenyl phosphite.

(q) A Preliminary Assessment Infor- ation Manufacturer's Report must e submitted by August 18, 1986, for ach chemical substance listed below.

CAS No.	Name
6-73-8	Phosphonic acid, tributyl ester.

(r)—(s) [Reserved]

(t) A Preliminary Assessment Infor- ation Manufacturer's Report must e submitted by February 12, 1987, for ach substance listed below.

CAS No.	Name
6-29-7	2-Butanone, oxime
7-63-0	2-Propanol
534-04-4	Propane, 2-methoxy-2-methyl-
956-55-6	Acetamide, N-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-bromo-4,6-dinitrophenyl)azo]-4-ethoxyphenyl]-

(u) A Preliminary Assessment Infor- ation Manufacturer's Report must e submitted by August 18, 1987, for ach substance listed below.

CAS No.	Substance
100-41-4	Ethylbenzene
3618-72-2	Acetamide, N-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-bromo-4,6-dinitrophenyl)azo]-4-methoxy phenyl]-
3618-73-3	Acetamide, N-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-chloro-4,6-dinitrophenyl)azo]-4-methoxy phenyl]-
21429-43-6	Acetamide, N-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-chloro-4,6-dinitrophenyl)azo]-4-ethoxy phenyl]-

(v) A Preliminary Assessment Information Manufacturer's Report must be submitted by February 18, 1988, for each substance listed below.

CAS No.	Substance
128-86-9	2,6-Anthracenedisulfonic acid, 4,8-diamino-9,10-dihydro-1,5-dihydroxy-9,10-dioxo-.
2861-02-1	2,6-Anthracenedisulfonic acid, 4,8-diamino-9,10-dihydro-1,5-dihydroxy-9,10-dioxo-, disodium salt.
6247-34-3	2-Anthracenesulfonic acid, 4-[(4-(acetylamino)phenyl)amino]-1-amino-9,10-dihydro-9,10-dioxo-
6424-85-7	2-Anthracenesulfonic acid, 4-[(t-(acetylamino)phenyl)amino]-1-amino-9,10-dihydro-9,10-dioxo-, monosodium salt.
12217-79-7	9,10-Anthracenedione, 1,5-diaminochloro-4,8-dihydroxy-.
17418-58-5	9,10-Anthracenedione, 1-amino-4-hydroxy-2-phenoxy-.

(w) Manufacturers and importers of the substances listed below must submit a Preliminary Assessment Information Manufacturer's Report for each site at which they manufacture or import each substance by the reporting date shown in the table below. The substances are listed in Chemical Abstracts Service Registry Number order. Typically EPA lists the trivial or common name first, then, following the symbol "- -", EPA lists the substance by its TSCA Chemical Substance Inventory name. Whenever EPA lists a single name, the name may be either the TSCA Chemical Substance Inventory name, a trivial name, or a common name. Generally, when a single name is listed, it is the TSCA Chemical Substances Inventory name.

CAS No.	Substance	Effective date	Reporting date
68-12-2	Dimethyl formamide—Formamide, *N,N*-dimethyl-	4/13/89	6/13/89
74-83-9	Methyl bromide—Methane, bromo-	4/13/89	6/13/89
74-90-8	Hydrocyanic acid	5/16/88	7/13/88
75-00-3	Chloroethane—Ethane, chloro-	4/13/89	6/13/89

CAS No.	Substance	Effective date	Reporting da
75-37-6	1,1-Difluoroethane—Ethane, 1,1-difluoro-	4/13/89	6/13/8
75-43-4	Dichloromonofluoromethane—Methane, dichlorofluoro-	4/13/89	6/13/8
75-45-6	Chlorodifluoromethane—Methane, chlorodifluoro-	4/13/89	6/13/8
75-52-5	Nitromethane—Methane, nitro-	4/13/89	6/13/8
75-68-3	1-Chloro-1,1-difluoroethane—Ethane, 1-chloro-1,1-difluoro-	4/13/89	6/13/8
79-00-5	1,1,2-Trichloroethane—Ethane, 1,1,2-trichloro-	4/13/89	6/13/8
79-24-3	Nitroethane—Ethane, nitro-	4/13/89	6/13/8
88-04-0	*p*-Chloro-m-xylenol—Phenol, 4-chloro-3,5-dimethyl-	4/13/89	6/13/8
95-14-7	1,2,3-Benzotriazole—1*H*-Benzotriazole	4/13/89	6/13/8
100-02-7	*p*-Nitrophenol—Phenol, 4-nitro-	4/13/89	6/13/8
100-40-3	4-Vinylcyclohexene	1/11/90	3/12/9
101-84-8	Diphenyl oxide—Benzene, 1,1′-oxybis-	4/13/89	6/13/8
102-71-6	Triethanolamine—Ethanol, 2,2′, 2″-nitrilotris-	4/13/89	6/13/8
107-98-2	1-Methoxy-2-propanol—2-Propanol, 1-methoxy-	4/13/89	6/13/8
111-42-2	Diethanolamine—Ethanol, 2,2′-iminobis-	4/13/89	6/13/8
111-76-2	2-Butoxyethanol—Ethanol, 2-butoxy-	4/13/89	6/13/8
111-77-3	Diethylene glycol monomethyl ether—Ethanol, 2-(2-methoxyethoxy)-	4/13/89	6/13/8
111-90-0	Diethylene glycol monoethyl ether—Ethanol, 2-(2-ethoxyethoxy)-	4/13/89	6/13/8
115-96-8	Ethanol, 2-chloro-, phosphate (3:1)	12/16/88	2/14/8
118-79-6	2,4,6-tribromophenol	1/11/90	3/12/9
120-32-1	2-Benzyl-4-chlorophenol—Phenol, 4-chloro-2-(phenylmethyl)-	4/13/89	6/13/8
123-72-8	Butanal	12/16/88	2/14/8
124-16-3	1-Butoxyethoxy-2-propanol—2-Propanol, 1-(2-butoxyethoxy)-	4/13/89	6/13/8
131-17-9	Diallyl phthalate—1,2-Benzenedicarboxylic acid, di-2-propenyl ester	4/13/89	6/13/8
142-28-9	1,3-Dichloropropane—Propane, 1,3-dichloro-	4/13/89	6/13/8
632-79-1	Tetrabromophthalic anhydride	1/11/90	3/12/9
822-06-0	Hexane, 1,6-diisocyanato-	6/20/88	8/18/8
1163-19-5	Decabromodiphenyl ether	1/11/90	3/12/9
1313-13-9	Manganese dioxide - - manganese oxide	5/16/88	7/13/8
1313-27-5	Molybdenum trioxide - - molybdenum oxide	5/16/88	7/13/8
1314-62-1	Vanadium pentoxide - - vanadium oxide	5/16/88	7/13/8
3194-55-6	Hexabromocyclododecane	1/11/90	3/12/9
3296-90-0	Dibromoneopentyl glycol	1/11/90	3/12/9
4170-30-3	2-Butenal	6/20/88	8/18/8
5131-66-8	1-Butoxy-2-propanol—2-Propanol, 1-butoxy-	4/13/89	6/13/8
6145-73-9	1-Propanol, 2-chloro-, phosphate (3:1)	12/16/88	2/14/8
7440-22-4	Silver	5/16/88	7/13/8
7647-10-1	Palladium (II) chloride - - palladium chloride	5/16/88	7/13/8
7664-39-3	Hydrogen fluoride - - hydrofluoric acid	5/16/88	7/13/8
7681-49-4	Sodium fluoride	5/16/88	7/13/8
7723-14-0	Phosphorus	5/16/88	7/13/8
7726-95-6	Bromine	5/16/88	7/13/8
7761-88-8	Silver nitrate - - nitric acid, silver (1+) salt	5/16/88	7/13/8
7782-49-2	Selenium	5/16/88	7/13/8
7785-87-7	Manganese (II) sulfate (1:1) - - sulfuric acid, manganese (2+) salt (1:1)	5/16/88	7/13/8
10124-43-3	Colbaltous sulfate - - sulfuric acid, cobalt (2+) salt (1:1)	5/16/88	7/13/8
10361-37-2	Barium chloride	5/16/88	7/13/8
12070-12-1	Tungsten carbide	5/16/88	7/13/8
12604-53-4	Ferromanga-nese	5/16/88	7/13/8
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)	12/16/88	2/14/8
13674-87-8	2-Propanol, 1,3-dichloro-, phosphate (3:1)	12/16/88	2/14/8
25168-06-3	Isopropyl phenol—Phenol, (1-methylethyl)-	4/13/89	6/13/8
25498-49-1	Tripropylene glycol monomethyl ether—Propanol, [2-(2-methoxymethylethoxy)methylethoxy]-	4/13/89	6/13/8
29385-43-1	Tolyl triazole—1*H*-Benzotriazole, methyl-	4/13/89	6/13/8
32534-81-9	Pentabromodiphenyl ether	1/11/90	3/12/9
32536-52-0	Octabromodiphenyl ether	1/11/90	3/12/9
32588-76-4	Ethylene Bis-(tetrabromophthalimide)	1/11/90	3/12/9
33125-86-9	Phosphoric acid, 1,2-ethanediyl tetrakis(2-chloroethyl) ester	12/16/88	2/14/8
34590-94-8	Dipropylene glycol monomethyl ether—Propanol, (2-methoxymethylethoxy)-	4/13/89	6/13/8
37853-59-1	1,2-Bis(tribromophenoxy) ethane	1/11/90	3/12/9
41291-34-3	Ethylene(5,6-dibromonorbornane-2,3-dicarboximide)	1/11/90	3/12/9
57137-10-7	Tribrominated polystyrene	1/11/90	3/12/9
61262-53-1	Ethylene bis(pentabromophenoxide)	1/11/90	3/12/9
68122-86-1	Imidazolium compounds, 4,5-dihydro-1-methyl-2-nortallow alkyl-1-(2-tallow amidoethyl), Me sulfates	6/20/88	8/18/8
68183-35-5	Ethanaminium, 2-amino-*N*-(2-aminoethyl)-*N*-(2-hydroxyethyl)-*N*-methyl-, *N,N*-ditallow acyl derivs., Me sulfates (salts)	6/20/88	8/18/8
68389-88-8	Poly(oxy-1,2-ethanediyl), alpha-[2-[bis(2-aminoethyl)methylammonio]ethyl]-omega-hydroxy-, *N,N*-dicoco acyl derivs., Me sulfates (salts)	6/20/88	8/18/8
68389-89-9	Poly(oxy-1,2-ethanediyl), alpha-[2-[bis(2-aminoethyl)methylammonio]ethyl-omega-]hydroxy-, *N,N*-bis (hydrogenated tallow acyl) derivs., Me sulfates (salts)	6/20/88	8/18/8

CAS No.	Substance	Effective date	Reporting date
8410-69-5	Poly(oxy-1,2-ethanediyl), alpha-[2-[bis(2-aminoethyl)methylammonio]ethyl]-omega-hydroxy-, *N,N*-ditallow acyl derivs., Me sulfates (salts)	6/20/88	8/18/88
8413-04-7	Poly[oxy(methyl-1,2-ethanediyl)], alpha-[2-[bis(2-aminoethyl)methylammonio]methylethyl]-omega-hydroxy-, *N,N*-ditallow acyl derivs., Me sulfates (salts)	6/20/88	8/18/88
8554-06-3	Poly(oxy-1,2-ethanediyl), alpha-[3-[bis(2-aminoethyl)methylammonio]-2-hydroxypropyl]-omega-hydroxy-, *N*-coco acyl derivs., Me sulfates (salts)	6/20/88	8/18/88
0914-09-9	Poly(oxy-1,2-ethanediyl), alpha-[2-[bis(2-aminoethyl)methylammonio]ethyl]-omega-hydroxy-, *N,N*-di-C_{14-18} acyl derivs., Me sulfates (salts)	6/20/88	8/18/88

Approved by the Office of Management and Budget under control number 2070-054)

Secs 8(a) and 8(d), 90 Stat. 2027, 2029; 15 U.S.C. 2607 (a) and (d))

[47 FR 26998, June 22, 1982]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 712.30, see the List of CFR Sections Affected in the Finding Aids section of this volume.

PART 716—HEALTH AND SAFETY DATA REPORTING

Subpart A—General Provisions

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Subpart B—Specific Chemical Listings

716.105 Additions of substances and mixtures to which this subpart applies.
716.120 Substances and listed mixtures to which this subpart applies.

AUTHORITY: 15 U.S.C. 2607(d).

SOURCE: 51 FR 32726, Sept. 15, 1986, unless otherwise noted.

Subpart—General Provisions

§ 716.1 Scope and compliance.

(a) This subpart sets forth requirements for the submission of lists and copies of health and safety studies on chemical substances and mixtures selected for priority consideration for testing rules under section 4(a) of the Toxic Substances Control Act (TSCA) and on other chemical substances and mixtures for which EPA requires health and safety information in fulfilling the purposes of TSCA.

(b) Section 15(3) of TSCA makes it unlawful for any person to fail or refuse to submit information required under this subpart. Section 16 provides that a violation of section 15 renders a person liable to the United States for a civil penalty and possible criminal prosecution. Under section 17, the district courts of the United States have jurisdiction to restrain any violation of section 15.

§ 716.3 Definitions.

The definitions in section 3 of TSCA apply to this subpart. In addition, the following definitions are provided for the purposes of this subpart:

"Byproduct" means a chemical substance produced without a separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance(s) or mixture(s).

"Co-product" means a chemical substance produced for a commercial purpose during the manufacture, processing, use, or disposal of another chemical substance(s) or mixture(s).

"Copy of study" means the written presentation of the purpose and methodology of a study and its results.

"EPA" means the United States Environmental Protection Agency.

"Health and safety study" or "study" means any study of any effect of a chemical substance or mixture on health or the environment or on both, including underlying data and epidemiological studies, studies of occupational exposure to a chemical substance or mixture, toxicological, clinical, and ecological or other studies of a chemical substance or mixture, and any test performed under TSCA.

(1) It is intended that the term "health and safety study" be interpreted broadly. Not only is information which arises as a result of a formal, disciplined study included, but other information relating to the effects of a chemical substance or mixture on health or the environment is also included. Any data that bear on the effects of a chemical substance on health or the environment would be included. Chemical identity is part of, or underlying data to, a health and safety study.

(2) Examples are:

(i) Long- and short-term tests of mutagenicity, carcinogenicity, or teratogenicity; data on behavioral disorders; dermatoxicity; pharmacological effects; mammalian absorption, distribution, metabolism, and excretion; cumulative, additive, and synergistic effects; and acute, subchronic, and chronic effects.

(ii) Tests for ecological or other environmental effects on invertebrates, fish, or other animals, and plants, including: Acute toxicity tests, chronic toxicity tests, critical life-stage tests, behavioral tests, algal growth tests, seed germination tests, plant growth or damage tests, microbial function tests, bioconcentration or bioaccumulation tests, and model ecosystem (microcosm) studies.

(iii) Assessments of human and environmental exposure, including workplace exposure, and impacts of a particular chemical substance or mixture on the environment, including surveys, tests, and studies of: Biological, photochemical, and chemical degradation; structure/activity relationships; air, water, and soil transport; biomagnification and bioconcentration; and chemical and physical properties, e.g., boiling point, vapor pressure, evaporation rates from soil and water, octanol/water partition coefficient, and water solubility.

(iv) Monitoring data, when they have been aggregated and analyzed to measure the exposure of humans or the environment to a chemical substance or mixture.

"Import" means to import for commercial purposes.

"Import for commercial purposes" means to import with the purpose of obtaining an immediate or eventual commercial advantage for the importer, and includes the importation of any amount of a chemical substance or mixture. If a chemical substance or mixture containing impurities is imported for commercial purposes, then those impurities are also imported for commercial purposes.

"Importer" means any person who imports a chemical substance, including a chemical substance as a part of a mixture or article, into the customs territory of the United States and includes the person primarily liable for the payment of any duties on the merchandise or an authorized agent acting on his behalf (as defined in 19 CFR 1.11). Importer also includes, as appropriate:

(1) The consignee.

(2) The importer of record.

(3) The actual owner, if an actual owner's declaration and superseding bond has been filed in accordance with 19 CFR 141.20.

(4) The transferee, if the right to draw merchandise in a bonded warehouse has been transferred in accordance with Subpart C of 19 CFR Part 144. For the purpose of this definition the customs territory of the United States consists of the 50 States, Puerto Rico, and the District of Columbia.

"Impurity" means a chemical substance which is unintentionally present with another chemical substance.

"Listed mixture" means any mixture listed in § 716.120.

"Manufacture" means to manufacture for commercial purposes.

"Manufacture for commercial purposes" means: (1) To produce, with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes among other things such "manufacture" of any amount of a chemical substance or mixture:

(i) For commercial distribution, including for test marketing.

(ii) For use by the manufacturer, in- uding use for product research and evelopment, or as an intermediate.

(2) Manufacture for commercial pur- oses also applies to substances that e produced coincidentally during the anufacture, processing, use, or dis- osal of another substance or mixture, cluding byproducts and impurities. uch byproducts and impurities may, r may not, in themselves have com- ercial value. They are nonetheless roduced for the purpose of obtaining commercial advantage since they are art of the manufacture of a chemical roduct for a commercial purpose.

"Manufacturer" means a person who roduces or manufactures a chemical ıbstance. A person who extracts a omponent chemical substance from a reviously existing chemical substance r a complex combination of sub- ances is a manufacturer of that com- onent chemical substance.

"Person" includes any individual, irm, company, corporation, joint-ven- ure, partnership, sole proprietorship, ssociation, or any other business ntity, any State or political subdivi- ion thereof, any municipality, any nterstate body, and any department, gency, or instrumentality of the Fed- ral government.

"Process" means to process for com- nercial purposes.

"Process for commercial purposes" neans the preparation of a chemical ubstance or mixture, after its manu- acture, for distribution in commerce vith the purpose of obtaining an im- nediate or eventual commercial ad- antage for the processor. Processing f any amount of a chemical substance r mixture is included. If a chemical ubstance or mixture containing impu- ities is processed for commercial pur- oses, then those impurities are also rocessed for commercial purposes.

"Propose to manufacture, import, or rocess" means that a person has nade a management decision to ommit financial resources toward the nanufacture, importation, or process- ng of a substance or mixture.

"Substance" means "chemical sub- tance" as defined at section 3(2)(A) of TSCA, 15 U.S.C. 2602(2)(A).

"TSCA" means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

§ 716.5 Persons who must report.

(a)(1) A person who, in the 10 years preceding the effective date that a substance or mixture is added to § 716.120, either had proposed to manufacture, import, or process, or had manufactured, imported, or processed the substance or listed mixture.

(2) A person who, at the effective date that a substance or mixture is added to § 716.120, proposes to manufacture, import, or process, or is manufacturing, importing, or processing the substance or listed mixture.

(3) A person who, after the effective date that a substance or mixture is added to § 716.120, proposes to manufacture, import, or process the substance or listed mixture.

(b) [Reserved]

§ 716.10 Studies to be reported.

(a) In general, health and safety studies, as defined in § 716.3, on any substance or listed mixture listed in § 716.120, that are unpublished are reportable, i.e., must be submitted or listed. However, this requirement has limitations according to the nature of the material studied, so that:

(1) All studies of substances and listed mixtures are reportable. However, in the case of physical and chemical properties, only those studies listed in § 716.50 must be submitted.

(2) Studies of mixtures known to contain substances or listed mixtures listed in § 716.120 are reportable except for studies of physical and chemical properties and the studies exempted at § 716.20(a)(6)(i) through (vi).

(3) Studies of substances or listed mixtures that a person who is reporting has manufactured, imported, or processed or proposed to manufacture, import, or process only as impurities are not generally reportable under § 716.20(a)(9).

(4) Underlying data, such as medical or health records, individual files, lab notebooks, and daily monitoring records supporting studies do not have to be submitted initially. EPA may re-

quest underlying data later under § 716.40.

(b) [Reserved]

§ 716.20 Studies not subject to the reporting requirements.

(a) Excluding paragraph (a)(3) of this section, the following types of studies are exempt from the copy and list submission requirements of §§ 716.30 and 716.35.

(1) Studies which have been published in the scientific literature.

(2) Studies previously submitted to the EPA Office of Toxic Substances. These studies are limited to section 8(e) submissions, studies submitted during section 4 proceedings, studies submitted with premanufacture notices or significant new use notices, and studies submitted "for your information" (FYI submissions) in support of EPA's TSCA Existing Chemicals Program. Studies which have been initiated pursuant to a TSCA section 4(a) test rule, for which the person has submitted a letter of intent to conduct testing in accordance with the provisions of § 790.25 of Part 790 of this chapter, are exempt from the list submission requirements of § 716.35.

(3) Except for those studies described in paragraph (a)(2) of this section, studies previously submitted to any Federal agency with no claims of confidentiality are exempt only from the copy submission requirements of § 716.30, and must be listed in accordance with the provisions of § 716.35.

(4) Studies conducted or initiated by or for another person who is subject to, and who will report the studies under §§ 716.30 and 716.35.

(5) Studies of chemical substances which are not on the TSCA Chemical Substances Inventory. This exemption applies only to those substances within categories listed under § 716.120(c).

(6) The following types of studies when the subject of the study is a mixture known to contain a substance or listed mixture listed under § 716.120.

(i) Acute oral toxicity studies.

(ii) Acute dermal toxicity studies.

(iii) Acute inhalation toxicity studies.

(iv) Primary eye irritation studies.

(v) Primary dermal irritation studies.

(vi) Dermal sensitization studies.

(vii) Physical and chemical properties.

If the substance or listed mixture is an impurity, no reporting is required (see paragraph (a)(9) of this section).

(7) Analyzed aggregations of monitoring data based on monitoring data acquired more than 5 years preceding the date the substance or listed mixture was added to the list under § 716.120.

(8) Analyzed aggregations of monitoring data on mixtures known to contain one or more substances or listed mixtures listed in § 716.120, when the monitoring data are not analyzed to determine the exposure or concentration levels of the substances or listed mixture listed under § 716.120.

(9) Studies on a substance or listed mixture listed under § 716.120 that the person who is reporting has manufactured, imported, or processed or proposed to manufacture, import, or process only as an impurity. When reporting of such studies is to be required, that reporting will be separately proposed in the FEDERAL REGISTER.

(10) Studies of chemical substances or listed mixtures previously submitted by trade associations in accordance with the provisions of § 716.30.

(b) The following types of studies on substances or listed mixtures listed under § 716.120 are exempt from the copy and list submission requirements of §§ 716.30 and 716.35.

(1) For the listed ureaformaldehyde resins (CAS Nos. 9011-05-6 and 68611-64-3), studies on agronomic plant growth or damage which demonstrate only that the resins stimulate plant growth or cause plant damage when applied as a fertilizer.

(2) [Reserved]

§ 716.25 Adequate file search.

The scope of a person's responsibility to search records is limited to records where the required information is ordinarily kept, and to records kept by the person's individual employees whose assigned duty is to advise the person on the health and environmental effects of chemicals

Persons are not required to search any records retired prior to December 31, 1979 for information to comply with this subpart.

§ 716.30 Submission of copies of studies.

(a)(1) Except as provided in §§ 716.20 and 716.50, persons must send to EPA copies of any health and safety studies in their possession for the substances or listed mixtures listed in § 716.120. Persons are responsible for submitting copies on only the substances or listed mixtures which they: Have manufactured, imported, or processed or proposed to manufacture, import, or process (including as known byproducts) within the 10 years preceding the effective date for reporting on the substances or listed mixtures; manufacture, import, or process on the effective date for reporting on the substances or listed mixtures; and propose to manufacture, import, or process following the effective date for reporting on the substances or listed mixtures. Persons who list studies as ongoing or initiated under § 716.35(a) (1) and (2) must submit them when they are completed.

(2) [Reserved]

(b) Submissions under paragraph (a) of this section must be identified either on the face of the study or otherwise by the applicable chemical name and CAS number (if any) listed in § 716.120(a) (1) and (2), and must be accompanied by a cover letter containing the name, job title, address and telephone number of the submitting official, and the name and address of the manufacturing or processing establishment on whose behalf the submission is made. In the cover letter, submitters must identify any impurity or additive known to have been present in the substance or listed mixtures as studied unless its presence is specifically noted in the study itself. The cover letter accompanying a study submitted by a trade association must also state that the submission is to satisfy reporting requirements under this part.

(c) Copies of health and safety studies and the accompanying cover letters must be submitted, preferably by certified mail, to: Document Processing Center (TS-790) Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St. SW., Washington, DC 20460. ATTN: 8(d) Health and Safety Reporting Rule (Notification/Reporting).

[51 FR 32726, Sept. 15, 1986, as amended at 52 FR 20084, May 29, 1987; 52 FR 44828, Nov. 20, 1987; 53 FR 12523, Apr. 15, 1988]

§ 716.35 Submission of lists of studies.

(a) Except as provided in §§ 716.20 and 716.50, persons must send the lists described in paragraph (a) of this section to EPA for each of the substances or listed mixtures in § 716.120 which they are manufacturing, importing, or processing; or propose to manufacture, import, or process (including as known byproducts).

(1) *Ongoing studies.* As of the date a person becomes subject to this part, a list of ongoing health and safety studies being conducted by or initiated for them, noting for each entry: The beginning date of the study, the purpose of the study, the types of data to be collected, the anticipated date of completion, and the name and address of the laboratory conducting the study.

(2) *Initiated studies.* After the date a person becomes subject to this part, a list of studies initiated by or for them, noting for each entry: The beginning date of the study, the purpose of the study, the types of data to be collected, the anticipated date of completion, and the name and address of the laboratory conducting the study.

(3) *Studies which are known but without possession of copies.* As of the date a person becomes subject to this part, a list of unpublished health and safety studies known to them of which they do not have copies. The name and address of any person known to them to possess a copy of the unpublished study must accompany each entry on the list. For purposes of this section only, an unpublished study will be considered to be "known to" a person, if the study can be discovered by a file search in accordance with § 716.25.

(4) *Studies previously sent to Federal agencies without confidentiality claims.* A list of unpublished studies which have been sent to a Federal Agency with no claims of confidential-

ity. The submission must for each study: Identify the study by title, state the name and address to whom the study was sent, and the month and year in which the study was submitted. Any study identified will be treated as if it were submitted under section 8(d) and will be available for public disclosure under section 14(b) of TSCA. Persons subject to this requirement may submit either a list of unpublished health and safety studies previously submitted to any Federal agency without claims of confidentiality in accordance with § 716.35(a)(4), or copies of each such study in accordance with § 716.30.

(b) Submission under paragraph (a) of this section must be identified either on the face of the study or otherwise by the applicable chemical name and CAS number (if any) listed in § 716.120(a) (1) and (2), and must be accompanied by a cover letter containing the name, job title, address and telephone numbers of the submitting official, and the name and address of the manufacturing or processing establishment on whose behalf the submission is made.

(c) Lists of health and safety studies should be submitted, preferably by certified mail, to: Document Processing Center (TS-790) Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St. SW., Washington, DC 20460. ATTN: 8(d) Health and Safety Reporting Rule (Notification/Reporting).

[51 FR 32726, Sept. 15, 1986, as amended at 52 FR 20084, May 29, 1987; 52 FR 44828, Nov. 20, 1987; 53 FR 12523, Apr. 15, 1988; 53 FR 46746, Nov. 18, 1988]

§ 716.40 EPA requests for submission of further information.

EPA may, by letter, request a person to submit or make available for review the following information after the initial reporting under §§ 716.30 and 716.35. If the requested submissions are not made, EPA may subpoena them under section 11 of TSCA, 15 U.S.C. 2610.

(a) Submission of underlying data of the kind described in § 716.10(a)(4) by persons who submit copies of studies under § 716.30 or list studies under § 716.35(a)(1) or § 716.35(a)(2).

(b) Submission of preliminary reports of ongoing studies by persons who list the studies under § 716.35(a)(1) or § 716.35(a)(2).

(c) Submission of copies of studies by persons listed under § 716.35(a)(3) as possessing them.

§ 716.45 How to report on substances and mixtures.

Section 716.120 lists substances and mixtures, in order by Chemical Abstract Service Registry Number and by alphabetical order. Studies of listed substances and listed mixtures shall be reported as follows:

(a) When a substance is individually listed under § 716.120(a), studies of the substance and studies of mixtures known to contain the substance must be reported as studies of that substance.

(b) When two or more substances are listed as a mixture under § 716.120(b), studies of the listed mixture and studies of any mixture known to contain the listed mixture must be reported as studies of the listed mixture.

(c) Studies of the following preparations of a substance must be reported as studies of the substance itself, not as studies of mixtures known to contain the substance.

(1) The substance in aqueous solution.

(2) The substance containing a small amount of an additive, such as a stabilizer, emulsifier, or other chemical added for purposes of maintaining the integrity or physical form of the substance.

(3) The substance at any grade of purity.

§ 716.50 Reporting physical and chemical properties.

Studies of physical and chemical properties must be reported under this subpart if performed for the purpose of determining the environmental or biological fate of a substance, and only if they investigated one or more of the following properties:

(a) Water solubility.

(b) Adsorption/desorption on particulate surfaces, e.g., soil.

(c) Vapor pressure.

(d) Octanol/water partition coeffi- ent.

(e) Density/relative density (specific ravity).

(f) Particle size distribution for in- oluble solids.

(g) Dissociation constant.

(h) Degradation by photochemical echanisms—aquatic and atmospher- .

(i) Degradation by chemical mecha- isms—hydrolytic, reductive, and oxi- ative.

(j) Degradation by biological mecha- isms—aerobic and anaerobic.

716.55 Confidentiality claims.

(a)(1) Section 14(b) of TSCA pro- ides that EPA may not withhold rom disclosure, on the grounds that hey are confidential business infor- nation, health and safety studies of ny substance or mixture that has een offered for commercial distribu- ion (including for test marketing pur- oses and for use in research and de- elopment), any substance or mixture or which testinq is required under SCA section 4, or any substance for vhich notice is required under TSCA ection 5, except to the extent that lisclosure of data from such studies vould reveal—

(i) Processes used in the manufactur- ng, importing, or processing of the ubstance or mixture, or

(ii) The portion of a mixture com- orised by any of the substances in the nixture.

(2) Any respondent who wishes to ssert a claim that part of a study hould be withheld from disclosure be- ause disclosure would reveal a confi- lential process or quantitative mix- ure composition should briefly state he basis of the claim, e.g., by saying 'reveals confidential mixture propor- ion data," and clearly identify the naterial subject to the claim.

(3) Any respondent may assert a onfidentiality claim for company name or address, financial statistics, and product codes used by a company. This information will not be subject to the disclosure requirements of section 14(b) of TSCA.

(4) Information other than company name or address, financial statistics, and product codes used by a company, which is contained in a study, the disclosure of which would clearly be an unwarranted invasion of personal privacy (such as individual medical records), will be considered confidential by EPA as provided in Title 5, United States Code, section 552(b)(6).

(b) To assert a claim of confidentiality for data contained in a submitted document, the respondent must submit two copies of the document:

(1) One copy must be complete. In that copy, the respondent must indicate what data, if any, are claimed as confidential by bracketing or underlining the specific information. Each page containing data claimed as confidential must also contain a brief statement for the basis of the claim as well as a label such as "confidential," "proprietary," or "trade secret."

(2) The second copy must be complete, except that all information claimed as confidential in the first copy must be deleted. The second copy will be immediately subject to public disclosure.

(3) Failure to furnish a second copy when information is claimed as confidential in the first copy will be considered a presumptive waiver of the claim of confidentiality. EPA will notify the respondent by certified mail that a finding of a presumptive waiver of the claim of confidentiality has been made. The respondent will be given 30 days from the date of his or her receipt of this notification to submit the required second copy. If the respondent fails to submit the second copy within the 30 days, EPA will place the first copy in the public file.

(c) If no claim of confidentiality accompanies a document at the time it is submitted to EPA, the document will be placed in an open file available to the public without further notice to the respondent.

§ 716.60 Reporting schedule.

(a) *General requirements.* Except as provided in paragraphs (b) and (c) of this section, submissions under §§ 716.30 and 716.35 must be postmarked on or before 60 days after the effective date of the listing of a substance or listed mixture in § 716.120 or within 60 days of proposing to manufacture, import, or process a substance or listed mixture if first done after the effective date of the substance's or listed mixture's listing in § 716.120.

(b)(1) *Submission of lists of initiated studies.* Persons subject to the listing requirements of § 716.35(a)(2) must inform EPA of the initiated study within 30 days of its initiation.

(2) *Submission of copies of completed studies.* Persons must submit copies of studies listed as ongoing or initiated under § 716.35(a)(1) and (2) within 30 days of completing the study.

(c) *Requests for extensions of time.* Respondents who cannot meet a deadline under this section may apply for a reasonable extension of time. Requests for extensions must be in writing and addressed to: Director, Office of Toxic Substances (TS-792), Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, Attn: Section 8(d) extension. Extension requests must be postmarked on or before 40 days after the effective date of the listing of a substance or mixture in § 716.120. The Director of EPA's Office of Toxic Substances will grant or deny extension requests.

§ 716.65 Reporting period.

(a) The reporting period on a substance or listed mixture will terminate no later than: 10 years after the effective date on which a substance or listed mixture is added to § 716.120; or on the removal of the substance or listed mixture from § 716.120. The Assistant Administrator for the Office of Pesticides and Toxic Substances has the authority to remove a substance or listed mixture from § 716.120.

(b) The EPA Office of Toxic Substances (OTS) will conduct a biennial review of all of the chemical substances and mixtures listed in § 716.120, and request from other EPA offices and certain Federal agencies, all reasonable justifications for retaining each substance or mixture on, or removing each substance or mixture from, the § 716.120 list. Following each such review, the Assistant Administrator of the Office of Pesticides and Toxic Substances will remove any substance or mixture for which no reasonable justification has been received to retain such substance or mixture on the § 716.120 list. The Assistant Administrator may remove a substance or listed mixture from § 716.120 by publishing, without notice and comment, a final rule to that effect in the FEDERAL REGISTER. The rule shall not be effective any earlier than 90 days after its publication. Persons who believe that EPA should not remove a substance or listed mixture from § 716.120 may notify EPA and provide reasons for retaining the substance or listed mixture. If a reasonable justification for retaining a substance or listed mixture on the § 716.120 list is received, EPA will withdraw the substance from the final rule before its effective date.

(c) Notwithstanding the termination by the sunset provision in (a) above, removing a substance or listed mixture from § 716.120 also terminates the applicability of § 716.5(a)(3) to that substance or listed mixture so that persons first proposing to manufacture, import, or process the substance or listed mixture after the effective date of the removal have no reporting obligation under section 8(d) with respect to that substance or listed mixture. The removal also terminates the continuing obligation under § 716.35(a)(2) of persons previously subject to the rule under § 716.5(a)(2) or (3) to notify EPA of any initiation of studies on the removed substance or listed mixture that occur after the effective date of the removal. Only one reporting requirement would remain in effect. Persons who have been subject to the rule under § 716.5(a)(2) or (3) and who have submitted to EPA lists of ongoing or initiated studies under § 716.35(a)(1) or (2) must notify EPA of the completed study and submit the study regardless of the study's completion date.

Subpart B—Specific Chemical Listings

§ 716.105 Additions of substances and mixtures to which this subpart applies.

The requirements of this subpart will be extended periodically to cover additional substances and mixtures. Two procedures will be used to add substances and mixtures.

a) Except as provided in paragraph
) of this section, substances and mix-
res will be added to § 716.120 after
blication in the Federal Register of
notice of proposed amendment to
is subpart. There will be at least a
-day public comment period on the
tice. After consideration of the com-
ents, EPA will amend § 716.120 by
nal rule to add the substances and
ted mixtures.

b) Except as provided in paragraph
of this section, chemical sub-
ances, mixtures, and categories of
emical substances that have been
ded to the TSCA section 4(e) Priori-
List by the Interagency Testing
ommittee, established under section
of TSCA, will be added to § 716.120
t only to the extent that the total
mber of designated and recommend-
substances, mixtures and categories
chemical substances has not exceed-
50 in any 1 year. The addition of
ch chemical substances, mixtures,
d categories of chemical substances
§ 716.120 will be effective 30 days
ter publication of a notice to that
fect in the Federal Register.

(c) Prior to the effective date of an
nendment under paragraph (b) of
is section, the Assistant Administra-
r for Pesticides and Toxic Sub-
ances may for good cause withdraw a
emical substance, mixture, or cate-
ry of chemical substances from
716.120. Any information submitted
owing why a chemical substance,
ixture, or category of chemical sub-
ances should be withdrawn from the
nendment must be received by EPA
ithin 14 days after the date of publi-
tion of the notice under paragraph
(b) of this section. If a chemical substance, mixture, or category of chemical substances is withdrawn, a Federal Register notice announcing this decision will be published no later than the effective date of the amendment under paragraph (b) of this section. Persons who wish to submit information that shows why a chemical should be withdrawn must address their comments, in writing, to: Document Control Officer, Office of Pesticides and Toxic Substances, (TS-790), Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, ATTN: 8(d) Auto-ITC.

§ 716.120 Substances and listed mixtures to which this subpart applies.

Substances listed in this section appear in order by Chemical Abstract Service Registry Number. Chemical mixtures and categories are listed separately and by alphabetical order. Chemical substances listed within a category are provided only as examples of the category, and are not included on the list of substances. When a chemical substance in the substance or category list had been listed previously by a trivial (or common) name, it appears first, followed by the Chemical Abstract Service (CAS) name appearing in the TSCA Chemical Substance Inventory.

(a) *List of substances.* The following chemical substances are subject to all the provisions of Part 716. Manufacturers, importers, and processors of a listed substance are subject to the reporting requirements of Subpart A for that substance.

CAS No.	Substance	Special exemptions	Effective date	Sunset date
62-74-8	Acetic acid, fluoro-, sodium salt			
67-63-0	2-Propanol		03/07/86	03/07/96
67-66-3	Methane, trichloro-		12/15/86	12/15/96
67-72-1	Ethane, hexachloro-		06/01/87	06/01/97
68-12-2	Dimethyl formamide—Formamide, *N,N*-dimethyl-		04/29/83	01/13/86
71-55-6	1,1,1-Trichloroethane—Ethane, 1,1,1-trichloro-		4/13/89	4/13/99
74-83-9	Methane, bromo-		10/04/82	10/04/92
74-87-3	Chloromethane—Methane, chloro-		06/01/87	06/01/97
74-95-3	Methane, dibromo-		10/04/82	10/04/92
74-97-5	Methane, bromochloro-		06/01/87	06/01/97
75-00-3	Ethane, chloro-		06/01/87	06/01/97
75-02-5	Vinyl fluoride—Ethene, fluoro-		06/01/87	06/01/97
75-04-7	Ethanamine		10/04/82	10/04/92
75-05-8	Acetonitrile		06/01/87	06/01/97
75-09-2	Methylene chloride—Methane, dichloro-		10/04/82	10/04/92
75-12-7	Formamide		10/04/82	10/04/92
75-21-8	Oxirane		04/29/83	04/29/93
75-25-2	Methane, tribromo-		10/04/82	10/04/92
75-27-4	Methane, bromodichloro-		06/01/87	06/01/97
75-29-6	Propane, 2-chloro-		06/01/87	06/01/97
75-34-3	Ethane, 1,1-dichloro-		06/01/87	06/01/97
75-37-6	1,1-Difluoroethane—Ethane, 1,1-difluoro-		06/01/87	06/01/97
75-38-7	Vinylidene fluoride—Ethene, 1,1-difluoro-		4/13/89	4/13/99
75-43-4	Dichloromonofluoromethane—Methane, dichlorofluoro-		10/04/82	10/04/92
75-45-6	Chlorodifluoromethane—Methane, chlorodifluoro-		4/13/89	4/13/99
75-52-5	Nitromethane—Methane, nitro-		4/13/89	4/13/99
75-56-9	Oxirane, methyl-		4/13/89	4/13/99
75-68-3	1-Chloro-1,1-difluoroethane—Ethane, 1-chloro-1,1-difluoro-		10/04/82	10/04/92
75-86-5	Propanenitrile, 2-hydroxy-2-methyl-		4/13/89	4/13/99
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane—Ethane, 1,1,2-trichloro-1,2,2-trifluoro-		03/07/86	03/07/96
77-47-4	Hexachlorocyclopentadiene—1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-		4/13/89	4/13/99
77-58-7	Dibutyltin dilaurate—Stannane, dibutylbis[(1-oxododecyl)oxy]-		10/04/82	10/04/92
78-59-1	Isophorone—2-Cyclohexen-1-one, 3,5,5-trimethyl-		01/03/83	01/03/93
78-83-1	1-Propanol, 2-methyl-		10/04/82	10/04/92
78-87-5	1,2-Dichloropropane—Propane, 1,2-dichloro-		03/07/86	03/07/96
78-88-6	1-Propene, 2,3-dichloro-		10/04/82	10/04/92
78-93-3	Methyl ethyl ketone—2-Butanone		06/01/87	06/01/97
78-97-7	Propanenitrile, 2-hydroxy-		10/04/82	10/04/92
78-99-9	Propane, 1,1-dichloro-		06/01/87	06/01/97
79-00-5	Ethane, 1,1,2-trichloro-		03/07/86	03/07/96
79-06-1	Acrylamide—2-Propenamide		06/01/87	06/01/97
79-24-3	Nitroethane—Ethane, nitro-		10/04/82	10/04/92
79-94-7	Tetrabromobisphenol A—Phenol, 4,4′-(methylethylidene)bis[2,6-dibromo-		4/13/89	4/13/99
80-05-7	Bisphenol A—Phenol, 4,4′-(1-methylethylidene)bis-		06/20/85	06/20/95
80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl		06/28/84 03/07/86	06/28/94 03/07/96

80-62-6	Methyl methacrylate—2-Propenoic acid, 2-methyl-, methyl ester		4/13/89	4/13/99
84-65-1	Anthraquinone—9,10-Anthracenedione		12/28/84	12/28/94
85-22-3	Pentabromoethylbenzene—Benzene, pentabromoethyl-		12/28/84	12/28/94
85-68-7	Benzyl butyl phthalate—1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester		04/29/83	04/29/93
86-74-8	9*H*-Carbazole		03/07/86	03/07/96
87-68-3	Hexachloro-1,3-butadiene—1,3-Butadiene, 1,1,2,3,4,4-hexachloro-		10/04/82	10/04/92
88-04-0	*p*-Chloro-*m*-xylenol—Phenol, 4-chloro-3,5-dimethyl-		4/13/89	4/13/99
90-42-6	[1,1′-Bicyclohexyl]-2-one		06/01/87	06/01/97
91-08-7	Benzene, 1,3-diisocyanato-2-methyl-		06/01/87	06/01/97
91-20-3	Naphthalene		06/01/87	06/01/97
91-58-7	Naphthalene, 2-chloro-		10/04/82	10/04/92
92-52-4	1,1′-Biphenyl		04/29/83	04/29/93
92-69-3	[1,1′-Biphenyl]-4-ol		06/01/87	06/01/97
92-84-2	10*H*-Phenothiazine		06/01/87	06/01/97
92-87-5	[1,1′-Biphenyl]-4,4′-diamine		06/01/87	06/01/97
95-14-7	1,2,3-Benzotriazole—1*H*-Benzotriazole		4/13/89	4/13/99
95-47-6	*o*-Xylene—Benzene, 1,2-dimethyl-		10/04/82	10/04/92
95-48-7	*o*-Cresol—Phenol, 2-methyl-		10/04/82	10/04/92
95-49-8	2/Chlorotoluene—Benzene, 1-chloro-2-methyl-		04/29/83	04/29/93
95-53-4	Benzenamine, 2-methyl-		03/07/86	03/07/96
95-63-6	1,2,4-Trimethylbenzene—Benzene, 1,2,4-trimethyl-		04/29/83	04/29/93
96-18-4	Propane, 1,2,3-trichloro-		06/01/87	06/01/97
96-29-7	2-Butanone, oxime		12/15/86	12/15/96
96-37-7	Methylcyclopentane—Cyclopentane, methyl-		06/20/85	06/20/95
97-18-7	Phenol, 2,2′-thiobis[4,6-dichloro-		06/01/87	06/01/97
97-23-4	Phenol, 2,2′-methylenebis[4-chloro-		06/01/87	06/01/97
97-88-1	Butyl methacrylate—2-Propenoic acid, 2-methyl-, butyl ester		4/13/89	4/13/99
98-01-1	2-Furancarboxaldehyde		06/01/87	06/01/97
98-06-6	Benzene, (1,1-dimethylethyl)-		06/01/87	06/01/97
98-09-9	Benzenesulfonyl chloride		03/07/86	03/07/96
98-51-1	*p*-*tert*-Butyltoluene—Benzene, 1-(1,1-dimethylethyl)-4-methyl-		06/25/86	06/25/96
98-56-6	4-Chlorobenzotrifluoride—Benzene, 1-chloro-4-(trifluoromethyl)-		04/29/83	04/29/93
98-73-7	*p*-*tert*-Butylbenzoic acid—Benzoic acid, 4-(1,1-dimethylethyl)-		06/25/86	06/25/96
98-82-8	Cumene—Benzene, (1-methylethyl)-		12/28/84	12/28/94
98-83-9	Benzene, (1-methylethenyl)-		06/01/87	06/01/97
98-95-3	Nitrobenzene—Benzene, nitro-		10/04/82	10/04/92
100-02-7	*p*-Nitrophenol—Phenol, 4-nitro-		4/13/89	4/13/99
100-40-3	4-Vinylcyclohexene		1/11/90	1/11/00
100-41-4	Benzene, ethyl-		06/19/87	06/19/97
100-48-1	4-Pyridinecarbonitrile		06/01/87	06/01/87
100-54-9	3-Pyridinecarbonitrile		06/01/87	12/29/88
100-70-9	2-Pyridinecarbonitrile		06/01/87	06/01/97
101-68-8	Benzene, 1,1′-methylenebis[4-isocyanato-		06/01/87	06/01/97
101-77-9	Benzenamine, 4,4′-methylenebis-		10/04/82	10/04/92
101-84-8	Diphenyl oxide—Benzene, 1,1′-oxybis-		4/13/89	4/13/99
102-71-6	Triethanolamine—Ethanol, 2,2′,2″-nitrilotris-		4/13/89	4/13/99
104-49-4	Benzene, 1,4-diisocyanato-		06/01/87	06/01/97
104-51-8	Benzene, butyl-		06/01/87	06/01/97

CAS No.	Substance	Special exemptions	Effective date	Sunset date
104-76-7	1-Hexanol, 2-ethyl-		06/01/87	06/01/97
105-60-2	*2H*-Azepin-2-one, hexahydro-		06/01/87	06/01/97
106-42-3	*p*-Xylene—Benzene, 1,4-dimethyl-		10/04/82	10/04/92
106-43-4	Benzene, 1-chloro-4-methyl-		06/01/87	06/01/97
106-44-5	*p*-Cresol—Phenol, 4-methyl-		10/04/82	10/04/92
106-49-0	Benzenamine, 4-methyl-		03/07/86	03/07/96
106-50-3	*p*-Phenylenediamine—1,4-Benzenediamine		10/04/82	10/04/92
106-51-4	Quinone—2,5-Cyclohexadiene-1,4-dione		10/04/82	10/04/92
106-88-7	Oxirane, ethyl-		10/04/82	10/04/92
106-89-8	Oxirane, (chloromethyl)-		10/04/82	10/04/92
107-06-2	Ethane, 1,2-dichloro-		06/01/87	06/01/97
107-10-8	1-Propanamine		03/07/86	03/07/96
107-19-7	2-Propyn-1-ol		03/07/86	03/07/96
107-98-2	1-Methoxy-2-propanol—2-Propanol, 1-methoxy-		4/13/89	4/13/99
108-05-4	Vinyl acetate—Acetic acid ethenyl ester		02/10/86	02/10/96
108-10-1	Methyl isobutyl ketone—2-Pentanone, 4-methyl-		10/04/82	10/04/92
108-31-6	Maleic anhydride—2,5-Furandione		09/10/84	09/10/94
108-38-3	*m*-Xylene—Benzene, 1,3-dimethyl-		10/04/82	10/04/92
108-39-4	*m*-Cresol—Phenol, 3-methyl-		10/04/82	10/04/92
108-60-1	Propane, 2,2′-oxybis[1-chloro-		06/01/87	06/01/97
108-67-8	1,3,5-Trimethylbenezene—Benzene, 1,3,5-trimethyl-		02/13/84	02/13/94
108-86-1	Benzene, bromo-		06/01/87	06/01/97
108-88-3	Toluene—Benzene, methyl-		10/04/82	10/04/92
108-89-4	4-Methylpyridine—Pyridine, 4-methyl-		09/10/84	09/10/94
108-94-1	Cyclohexanone		10/04/82	10/04/92
108-95-2	Phenol		06/01/87	06/01/97
108-98-5	Benzenethiol		03/07/86	03/07/96
108-99-6	3-Methylpyridine—Pyridine, 3-methyl-		09/10/84	09/10/94
109-06-8	2-Methylpyridine—Pyridine, 2-methyl-		09/10/84	09/10/94
109-77-3	Propanedinitrile		03/07/86	03/07/96
109-87-5	Methane, Dimethoxy-		06/01/87	06/01/97
109-89-7	Ethanamine, *N*-ethyl-		06/01/87	06/01/97
110-75-8	Ethene, (2-chloroethoxy)-		03/07/86	03/07/96
110-82-7	Cyclohexane		12/19/85	12/19/95
110-86-1	Pyridine		10/04/82	10/04/92
111-21-7	Ethylene bisoxyethylene diacetate—Ethanol, 2,2′-[1,2-ethanediylbis(oxy)]bis-, diacetate		01/13/84	12/29/88
111-40-0	Diethylenetriamine—1,2-Ethanediamine, *N*-(2-aminoethyl)-		04/29/83	04/29/93
111-42-2	Diethanolamine—Ethanol, 2,2′-iminobis-		4/13/89	4/13/99
111-69-3	Hexanedinitrile		06/01/87	06/01/97
111-76-2	2-Butoxyethanol—Ethanol, 2-butoxy-		4/13/89	4/13/99
111-77-3	Diethylene glycol monomethyl ether—Ethanol, 2-(2-methoxyethoxy)-		4/13/89	4/13/99
111-90-0	Diethylene glycol monoethyl ether—Ethanol, 2-(2-ethoxyethoxy)-		4/13/89	4/13/99
111-91-1	Ethane, 1,1′-[methylenebis(oxy)]bis[2-chloro-		03/07/86	03/07/96
111-92-2	1-Butanamine, *N*-butyl-		06/01/87	06/01/97
112-35-6	Triethyleneglycol monomethyl ether—Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-		06/20/85	06/20/95

112-50-5	Triethyleneglycol monoethyl ether—Ethanol, 2-[2-(2-ethoxyethoxy)ethoxy]-		06/20/85	06/20/95
112-90-3	Oleylamine—9-Octadecen-1-amine, (*Z*)-		01/13/84	01/13/94
115-28-6	Chlorendic acid—Bicyclo[2.2.1] hept-5-ene-2,3-dicarboxylic acid, 1,4,5,6,7,7-hexachloro-		04/29/83	01/13/86
115-96-8	Ethanol, 2-chloro-, phosphate (3:1)		12/16/88	12/16/98
118-79-6	2,4,6-Tribromophenol		1/11/90	1/11/00
120-20-7	Anthracene		06/01/87	06/01/97
120-32-1	2-Benzyl-4-chlorophenol—Phenol, 4-chloro-2-chlorophenol(phenyl methyl)-		4/13/89	4/13/99
121-44-8	Ethanamine, *N,N*-diethyl-		01/13/84	01/13/94
121-47-1	Benzenesulfonic acid, 3-amino-		06/01/87	12/29/88
122-09-8	Benzeneethanamine, α,α-dimethyl-		03/07/86	03/07/96
122-66-7	Hydrazine, 1,2-diphenyl-		06/01/87	06/01/97
122-99-6	2-Phenoxyethanol—Ethanol, 2-phenoxy-		07/01/83	07/01/93
123-31-9	Hydroquinone—1,4-Benzenediol		10/04/84	10/04/94
123-61-5	Benzene, 1,3-diisocyanato-		06/01/87	06/01/97
123-72-8	Butanal		12/16/88	12/16/98
124-16-3	1-Butoxyethoxy-2-propanol—2-Propanol, 1-(2-butoxyethoxy)-		4/13/89	4/13/99
124-17-4	2-(2-Butoxyethoxy)ethyl acetate—Ethanol, 2-(2-butoxyethoxy)-, acetate		01/13/82	01/13/92
124-48-1	Methane, dibromochloro-		06/01/87	06/01/97
126-73-8	Phosphoric acid, tributyl ester		06/18/86	06/18/96
126-99-8	Chloroprene—1,3-Butadiene, 2-chloro-		12/28/84	12/28/94
127-18-4	Ethene, tetrachloro-		06/01/87	06/01/97
128-39-2	Phenol, 2,6-bis(1,1-dimethylethyl)-		12/19/85	12/19/95
128-66-9	2,6-Anthracenedisulfonic acid, 4,8-diamino-9,10-dihydro-1,5-dihydroxy-9,10-dioxo-		12/21/87	12/21/97
129-00-0	Pyrene		06/01/87	06/01/97
131-17-9	Diallyl phthalate—1,2-Benzenedicarboxylic acid, di-2-propenyl ester		4/13/89	4/13/99
135-98-8	Benzene, (1-methylpropyl)-		06/01/87	06/01/97
137-20-2	Soldium *N*-methyl-*N*-oleoyltaurine—Ethanesulfonic acid, 2-[methyl (1-oxo-9-octadecenyl)amino]-, sodium salt, (*Z*)-		12/28/84	12/28/94
137-26-8	Thioperoxydicarbonic diamide, tetramethyl-		06/01/87	06/01/97
139-25-3	Benzene, 1,1′-methylenebis[4-isocyanato-3-methyl-		06/01/87	06/01/97
140-08-9	Tris(2-chloroethyl)phosphite—Ethanol, 2-chloro-, phosphite (3:1)		04/29/83	01/13/86
140-66-9	4-(1,1,3,3-Tetramethylbutyl) phenol—Phenol, 4-(1,1,3,3-tetramethylbutyl)-		01/30/83	12/29/88
140-88-5	Ethyl acrylate—2-Propenoic acid, ethyl ester		4/13/89	4/13/99
141-79-7	Mesityl oxide—3-Penten-2-one, 4-methyl-		10/04/82	10/04/92
142-28-9	Propane, 1,3,-dichloro-		03/07/86	03/07/96
142-84-7	1-Propanamine, *N*-propyl-		03/07/86	03/07/96
143-22-6	Triethyleneglycol monobutyl ether—Ethanol, 2-[-2-(2-butoxyethoxy)ethoxy]-		06/20/85	06/20/95
149-30-4	Mercaptobenzcthiazole—2(3*H*-Benzothiazolethione		12/28/84	12/28/94
149-57-5	2-Ethylhexanoic acid—Hexanoic acid, 2-ethyl-		06/28/84	06/28/94
328-84-7	3,4-Dichlorobenzotrifluoride—Benzene, 1,2-dichloro-4-(trifluoromethyl)-		05/08/85	05/08/95
357-57-3	Strychnidin-10-one, 2,3-dimethoxy-		03/07/86	03/07/96
428-59-1	Oxirane, trifluoro(trifluoromethyl)-		10/04/82	10/04/92
472-41-3	Phenol, 4-(3,4-dihydro-2,2,4-trimethyl-2*H*-1-benzopyran-4-yl)-		06/01/87	12/29/88
506-96-7	Acetyl bromide		06/01/87	06/01/97
526-73-8	1,2,3-Trimethylbenzene—Benzene, 1,2,3-trimethyl-		12/13/84	02/13/94
530-50-7	Hydrazine, 1,1-diphenyl-		06/01/87	06/01/97
534-07-6	2-Propanone, 1,3-dichloro-		06/01/87	06/01/97
540-54-5	Propane, 1-chloro-		06/01/87	06/01/97
540-84-1	Pentane, 2,2,4-trimethyl-		06/01/87	06/01/97

CAS No.	Substance	Special exemptions	Effective date	Sunset date
542-75-6	1-Propene, 1,3-dichloro-		06/01/87	06/01/97
556-67-2	Octamethylcyclotetrasiloxane—Cyclotetrasiloxane, octamethyl-		12/28/84	12/28/94
563-54-2	1-Propene, 1,2-dichloro-		03/07/86	12/29/88
563-58-6	1-Propene, 1,1-dichloro-		03/07/86	12/29/88
580-51-8	[1,1′-Biphenyl]-3-ol		06/01/87	06/01/97
584-84-9	Benzene, 2,4-diisocyanato-1-methyl-		06/01/87	06/01/97
591-08-2	Acetamide, *N*-(aminothioxomethyl)-		03/07/86	03/07/96
594-20-7	Propane, 2,2-dichloro-		03/07/86	03/07/96
598-21-0	Acetyl bromide, bromo-		06/01/87	06/01/97
598-31-2	2-Propanone, 1-bromo-		03/07/86	03/07/96
616-23-9	1-Propanol, 2,3-dichloro-		03/07/86	03/07/96
620-14-4	*m*-Ethyltoluene—Benzene, 1-ethyl-3-methyl-		04/29/83	04/29/93
622-96-8	*p*-Ethyltoluene—Benzene, 1-ethyl-4-methyl-		04/29/83	04/29/93
630-20-6	Ethane, 1,1,1,2-tetrachloro-		06/01/87	06/01/97
632-79-1	Tetrabromophthalic anhydride		1/11/90	1/11/00
646-06-0	1,3-Dioxolane		01/03/83	01/03/93
677-21-4	Trifluoromethylethene—1-Propene, 3,3,3-trifluoro-		04/29/83	01/13/86
685-91-6	Acetamide, *N,N*-diethyl-		06/01/87	06/01/97
692-42-2	Arsine, diethyl-		03/07/86	03/07/96
696-28-6	Arsonous dichloride, phenyl-		03/07/86	03/07/96
757-58-4	Tetraphosphoric acid, hexaethyl ester		03/07/86	03/07/96
812-03-3	Propane, 1,1,1,2-tetrachloro-		06/01/87	06/01/97
822-06-0	Hexane, 1,6-diisocyanato-		06/01/87	06/01/97
828-00-2	1,3-Dioxan-4-ol, 2,6-dimethyl-, acetate		06/01/87	06/01/97
930-22-3	Oxirane, ethenyl-		10/04/82	10/04/92
939-97-9	*p-tert*-Butylbenzaldehyde—Benzaldehyde, 4-(1,1-dimethylethyl)-		06/25/86	06/25/96
1000-82-4	Methylolurea—Urea, (hydroxymethyl)-		07/01/83	07/01/93
1070-78-6	Propane, 1,1,1,3-tetrachloro-		06/01/87	06/01/97
1163-19-5	Decabromodiphenyl ether		1/11/90	1/11/00
1185-81-5	Dibutyltin bis(lauryl mercaptide)—Stannane, dibutylbis(dodecylthio)		01/03/83	01/03/93
1208-52-2	Benzenamine, 2-[(4-aminophenyl)methyl]-		06/01/87	06/01/97
1300-71-6	Phenol, dimethyl-		06/01/87	06/01/97
1309-64-4	Antimony trioxide		10/04/82	10/04/92
1321-38-6	Benzene, diisocyanatomethyl-(unspecified isomer)		06/01/87	06/01/97
1321-64-8	Naphthalene, pentachloro-		10/04/82	10/04/92
1321-65-9	Naphthalene, trichloro-		10/04/82	10/04/92
1331-47-1	[1,1′-Biphenyl]-4,4′-diamino, dichloro-		06/01/87	06/01/97
1333-41-1	Methyl pyridine—Pyridine, methyl-		09/10/84	12/29/88
1335-87-1	Naphthalene, hexachloro-		10/04/82	10/04/92
1335-88-2	Naphthalene, tetrachloro-		10/04/82	10/04/92
1345-04-6	Antimony trisulfide		10/04/82	10/04/92
1464-53-5	2,2′-Bioxirane		10/04/82	10/04/92
1634-04-4	Propane, 2-methoxy-2-methyl-		12/15/86	12/15/96
1825-30-5	Naphthalene, 1,5-dichloro-		10/04/82	10/04/92
1825-31-6	Naphthalene, 1,4-dichloro-		10/04/82	10/04/92

			03/07/87	03/07/96
1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-		10/04/82	10/04/92
2050-69-3	Naphthalene, 1,2-dichloro-		10/04/82	10/04/92
2050-72-8	Naphthalene, 1,6-dichloro-		10/04/82	10/04/92
2050-73-9	Naphthalene, 1,7-dichloro-		10/04/82	10/04/92
2050-74-0	Naphthalene, 1,8-dichloro-		10/04/82	10/04/92
2050-75-1	Naphthalene, 2,3-dichloro-		10/04/82	10/04/92
2065-70-5	Naphthalene, 2,6-dichloro-		10/04/82	10/04/92
2198-75-6	Naphthalene, 1,3-dichloro-		10/04/82	10/04/92
2198-77-8	Naphthalene, 2,7-dichloro-		10/04/82	10/04/92
2234-13-1	Naphthalene, octachloro-		06/01/87	06/01/97
2536-05-2	Benzene, 1,1′-methylenebis[2-isocyanato-		06/01/87	06/01/97
2556-36-7	Cyclohexane, 1,4-diisocyanato		03/07/86	03/07/96
2763-96-4	3(2*H*)-Isoxazolone, 5-(aminomethyl)-		06/01/87	06/01/97
2778-42-9	Benzene, 1,3-bis(1-isocyanato-1-methylethyl-		12/21/87	12/21/97
2861-02-1	2,6-Anthracenedisulfonic acid, 4,8-diamino-9,10-dihydro-1,5-dihydroxy-9,10-dioxo-, disodium salt		10/04/82	10/04/92
3083-25-8	Oxirane, (2,2,2-trichloroethyl)-		06/01/87	06/01/97
3173-72-6	Naphthalene, 1,5,-diisocyanato-		1/11/90	1/11/00
3194-55-6	Hexabromocyclododecane		03/07/86	03/07/96
3288-58-2	Phosphorodithioic acid, *O,O*-diethyl-*S*-methyl ester		06/01/87	06/01/97
3296-90-0	1,3-Propanediol, 2,2-bis(bromomethyl)-		01/03/83	01/03/93
3319-31-1	Tris(2-ethylhexyl) trimellitate—1,2,4-Benzenetricarboxylic acid, tris(2-ethylhexyl)ester		06/28/84	12/29/88
3322-93-8	1,2-Dibromo-4-(1,2-dibromoethyl) cyclohexane—Cyclohexane, 1,2-dibromo-4-(1,2-dibromoethyl)-		01/13/84	01/13/94
3389-71-7	1,2,3,4,7,7-Hexachloronorbornadiene—Bicyclo[2.2.1]hepta-2,5-diene, 1,2,3,4,7,7-hexachloro-		06/19/87	06/19/97
3618-72-2	Acetamide, *N*-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-bromo-4,6-dinitrophenyl)azo]-4- methoxyphenyl]-		06/19/87	06/19/97
3618-73-3	Acetamide, *N*-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-chloro-4,6-dinitrophenyl)azo]-4-methoxyphenyl]-		12/15/86	12/15/96
3956-55-6	Acetamide, *N*-[5-[bis[2-(acetyloxy)ethyl]-amino]-2-[(2-bromo-4,6-dinitrophenyl)azo]-4-ethoxyphenyl		06/01/87	06/01/97
4098-71-9	Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-		03/07/86	03/07/96
4170-30-3	2-Butenal		06/01/87	06/01/97
5124-30-1	Cyclohexane, 1,1′-methylenebis[4-isocyanato-		4/13/89	4/13/99
5131-66-8	1-Butoxy-2-propanol—2-Propanol, 1-butoxy-		03/07/86	03/07/96
5344-82-1	Thiourea, (2-chlorophenyl)-		06/01/87	06/01/97
5873-54-1	Benzene, 1-isocyanato-2-[4-isocyanatophenyl)methyl]-		12/16/88	12/16/98
6145-73-9	1-Propanol, 2-chloro-, phosphate (3:1)		12/21/87	12/21/97
6247-34-3	2-Anthracenesulfonic acid, 4-[[4-(acetylamino)phenyl]amino]-1-amino-9,10-dihydro-9,10-dioxo-		01/03/83	01/03/93
6422-86-2	Bis(2-ethylhexyl) terephthalate—1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester		12/21/87	12/21/97
6424-85-7	2-Anthracenesulfonic acid, 4-[[4-(acetylamino)phenyl]amino]-1-amino-9,10-dihydro-9,10-dioxo-, monosodium salt		10/04/82	10/04/92
7320-37-8	Oxirane, tetradecyl-		06/01/87	06/01/97
7440-28-0	Thallium		10/04/82	10/04/92
7440-36-0	Antimony		06/01/87	06/01/97
7440-48-4	Cobalt	§ 716.20(b)(1) applies	06/03/85	06/03/95
9011-05-6	Urea, polymer with formaldehyde		06/01/87	06/01/97
9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester		06/01/87	06/01/87
10347-54-3	Cyclohexane, 1,4-bis(isocyanatomethyl)-		06/01/87	06/01/97
10436-39-2	1-Propene, 1,1,2,3-tetrachloro-		06/01/87	06/01/97
12001-85-3	Naphthenic acids, zinc salts		12/21/87	12/21/97
12217-79-7	9,10-Anthracenedione, 1,5-diamino-chloro-4,8-dihydroxy-		02/13/84	02/13/94
13414-54-5	Methallyl 2-nitrophenyl ether—Benzene, 1-[(2-methyl-2-propenyl)oxy]-2-nitro-		02/13/84	02/13/94
13414-55-6	7-Nitro-2,2-dimethyl-2,3-dihydro-benzofuran—Benzofuran, 2,3-dihydro-2,2-dimethyl-7-nitro-			

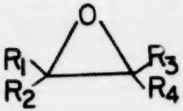
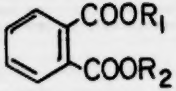
CAS No.	Substance	Special exemptions	Effective date	Sunset date
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)		12/16/88	12/16/98
13674-87-8	2-Propanol, 1,3-dichloro-, phosphate (3:1)		12/16/88	12/16/98
15646-96-5	Hexane, 1,6-diisocyanato-2,4,4-trimethyl-		06/01/87	06/01/97
16938-22-0	Hexane, 1,6-diisocyanato-2,2,4-trimethyl-		06/01/87	06/01/97
17418-58-5	9,10-Anthracenedione, 1-amino-4-hydroxy-2-phenoxy-		12/21/87	12/21/97
18495-30-2	Propane, 1,1,2,3-tetrachloro-		06/01/87	12/29/88
18633-25-5	Oxirane, tridecyl-		10/04/82	10/04/92
19660-16-3	2-Propenoic acid, 2,3-dibromopropyl ester		06/01/87	12/29/88
21429-43-6	Acetamide, *N*-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-chloro-4,6-dinitrophenyl)azo]-4-methoxyphenyl]-		06/19/87	06/19/97
25168-06-3	Isopropyl phenol—Phenol, (1-methylethyl)-		4/13/89	4/13/99
25168-21-2	Dibutyltin bis (isooctyl maleate)—2-Butenoic acid, 4,4′-[(dibutylstannylene)bis(oxy)]bis-[4-oxo-, diisoctyl ester, (*Z,Z*)-		01/03/83	01/03/93
25498-49-1	Tripropylene glycol monomethyl ether—Propanol, [2-(2-methoxy methylethoxy)methylethoxy]-		4/13/89	4/13/99
25550-14-5	Benzene, ethylmethyl- (mixed isomers)		04/29/83	04/29/93
25550-98-5	Phosphorous acid, diisodecyl phenyl ester		12/19/85	12/19/95
25551-13-7	Trimethylbenzene—Benzene, trimethyl- (mixed isomers)		02/13/84	02/13/94
25640-78-2	Isopropyl biphenyl—1,1′-Biphenyl, (1-methylethyl)-		06/28/84	06/28/94
25852-70-4	Monobutyltin tris (isooctyl) mercapto-acetate—Acetic acid, 2,2′,2′′-[(butylstannylidyne)tris(thio)]tris-, triisooctyl ester		01/03/83	01/03/93
26447-40-5	Benzene, 1,1′-methylenebis[isocyanato-		06/01/87	06/01/97
26471-62-5	Benzene, 1,3-diisocyanatomethyl-		06/01/87	06/01/97
26530-20-1	3(2*H*)-Isothiazolone, 2-octyl-		06/01/87	12/29/88
26952-23-8	1-Propene, dichloro-		06/01/87	06/01/97
29385-43-1	Tolyl triazole—1*H*-Benzotriazole, methyl-		4/13/89	4/13/99
32052-51-0	Isocyanic acid, trimethylcyclohexyl ester		06/01/87	06/01/97
32534-81-9	Pentabromodiphenyl ether		1/11/90	1/11/00
32536-52-0	Octabromodiphenyl ether		1/11/90	1/11/00
32588-76-4	Ethylene Bis-(tetrabromophthalimide)		1/11/90	1/11/00
33125-86-9	Phosphoric acid, 1,2-ethanediyl tetrakis (2-chloroethyl) ester		12/16/88	12/16/98
34590-94-8	Dipropylene glycol monomethyl ether—Propanol, (2-methoxymethylethoxy)-		4/13/89	4/13/99
37853-59-1	1,2-Bis(tribromophenoxy) ethane		1/11/90	1/11/00
38661-72-2	Cyclohexane, 1,3-bis(isocyanatomethyl)-		06/01/87	06/01/97
41291-34-3	Ethylene(5,6-dibromonorbornane-2,3-dicarboximide)		1/11/90	1/11/00
57137-10-7	Tribrominated polystyrene		1/11/90	1/11/00
61262-53-1	Ethylene bis(pentabromophenoxide)		1/11/90	1/11/00
61788-33-8	Terphenyl, chlorinated		10/04/82	12/29/88
61789-36-4	Calcium naphthenate—Naphthenic acids, calcium salts		07/01/83	07/01/93
61789-51-3	Cobalt naphthenate—Naphthenic acids, cobalt salts		07/01/83	07/01/93
61790-14-5	Lead naphthenate—Naphthenic acids, lead salts		07/01/83	07/01/93
68081-84-5	Oxirane, mono[(C_{10-16}-alkyloxy) methyl] derivatives		10/04/82	10/04/92
68122-86-1	Imidazolium compounds, 4,5-dihydro-1-methyl-2-nortallow alkyl-1-(2-tallow amidoethyl), methyl sulfates		06/20/88	06/20/98
68153-35-5	Ethanaminium, 2-amino-*N*-(2-aminoethyl-*N*-(2-hydroxyethyl)-*N*-methyl-, *N,N′*-ditallow acyl derivatives, methyl sulfates (salts).		06/20/88	06/20/98
68298-46-4	7-Amino-2,2-dimethyl-2,3-dihydrobenzofuran—7-Benzofuranamine,2,3-dihydro-2,2-dimethyl-		02/13/84	12/29/88
68389-88-8	Poly(oxy-1,2-ethanediyl), α-[2-[bis(2-aminoethyl)methylammonio]ethyl]-ω-hydroxy-, *N,N′*-dicoco acyl derivatives, methyl sulfates (salts).		06/20/88	06/20/98

68389–89–9	Poly(oxy-1,2-ethanediyl), α-[2-[bis(2-aminoethyl)methylammonio]ethyl]-ω-hydroxy-,*N,N'*-bis(hydrogenated tallow acyl) derivatives, methyl sulfates (salts).			
68410–69–5	Poly(oxy-1,2-ethanediyl), α-[2-[bis(2-aminoethyl)methylammonio]ethyl]-ω-hydroxy,- *N,N'*-ditallow acyl derivatives, methyl sulfates (salts).		06/20/88	06/20/98
68413–04–7	Poly[oxy(methyl-1,2-ethanediyl)], α-[2-[bis(2-aminoethyl)methylammonio] methylethyl]-ω-hydroxy-, *N,N'*-ditallow acyl derivatives, methyl sulfates (salts).		06/20/88	06/20/98
68554–06–3	Poly(oxy-1,2-ethanediyl), α-[3-[bis(2-aminoethyl)methylammonio]-2-hydroxy-propyl]-ω-hydroxy-, *N*-coco acyl derivatives, methyl sulfates (salts).		06/20/88	06/20/98
68611–64–3	Urea, reaction products with formaldehyde	§ 716.20(b)(1) applies	06/03/85	06/03/95
69009–90–1	Diisopropyl biphenyl—1,1′-Biphenyl, bis(1-methylethyl)-		06/28/84	12/29/88
70914–09–9	Poly(oxy-1,2-ethanediyl), α-[2-[bis(2-aminoethyl)methylammonio]ethyl]-ω-hydroxy-, *N,N'*-di[$C_{14\text{-}18}$ acyl] derivatives, methyl sulfates (salts).		06/20/88	06/20/88
75790–84–0	Benzene, 2-isocyanato-4-[(4-isocyanato-phenyl)methyl]-1-methyl-		06/01/87	06/01/97
75790–87–3	Benzene, 1-isocyanato-2-[(4-isocyanato-phenyl)thio]-		06/01/87	06/01/97

(b) *Listed mixtures.* The following listed mixtures are subject to all the provisions of Part 716. Manufacturers, importers, and processors of a listed mixture are subject to the report requirements of Subpart A for t mixture.

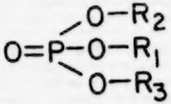
Mixture	CAS No.	Special exemptions	Effective date	Sunset date
Aromatic C_9 fraction from petroleum refining: The C_9 fraction is primarily composed of			02/13/84	02/13/94
o-Ethyltoluene—(Benzene, 1-ethyl-2-methyl-)	611-14-3			
m-Ethyltoluene—(Benzene, 1-ethyl-3-methyl-)	620-14-4			
p-Ethyltoluene—(Benzene, 1-ethyl-4-methyl-)	622-96-8			
Ethyltoluene—(Benzene, ethylmethyl-) (mixed isomers)	25550-14-5			
Trimethylbenzenes (mixed)—(Benzenes, trimethyl-)	25551-13-7			
1,2,3-Trimethylbenzene—(Benzene, 1,2,3-trimethyl-)	526-73-8			
1,2,4-Trimethylbenzene—(Benzene, 1,2,4-trimethyl-)	95-63-6			
1,3,5-Trimethylbenzene—(Benzene, 1,3,5-trimethyl-)	108-67-8			

(c) *By category.* The following categories are listed in alphabetical order. Chemical substances listed within a category are provided only as examples of the category. All chemical substances within a category are subject to all the provisions of Part 716 for the time period from the effective date of the category until the sunset date. Manufacturers, importers, a processors of any chemical substan within a category are subject to the r porting requirements of Subpart A f that category, except when the sun date for the particular substance pr dates the sunset date for the categor or when the exemption of § 716.20 of this Part applies.

Category	CAS No. (examples for category)	Special exemptions	Effective date	Sunset date
Alkyl epoxides—including all noncyclic aliphatic hydrocarbons with one or more epoxy functional groups.			10/04/82	12/29/88
				
$R_1=R_2=R_3=R_4=$H or alkyl. Groups R_1–R_4 may contain one or more epoxide functions.				
Oxirane, decyl-	2855-19-8		10/04/82	12/29/88
Oxirane, 2,2-dimethyl-	558-30-5		10/04/82	12/29/88
Oxirane, 2,3-dimethyl-	3266-23-7		10/04/82	12/29/86
Oxirane, dodecyl	3234-28-4		10/04/82	12/29/88
Oxirane, heptadecyl-	67860-04-2		10/04/82	12/29/86
Oxirane, octyl-	2404-44-6		10/04/82	12/29/88
Oxirane, pentadecyl-	22092-38-2		10/04/82	12/29/88
Alkyl phthalates—all alkyl esters of 1,2-benzenedicarboxylic acid (*ortho*-phthalic acid).			10/04/82	10/04/92
				
$R_1=R_2=$alkyl.				
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, bis(1-methylheptyl) ester	131-15-7		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	84-69-5		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, 2-butoxy-2-oxyethyl butyl ester	85-70-1		10/04/82	01/13/86
1,2-Benzenedicarboxylic acid, butyl cyclohexyl ester	84-64-0		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, butyl 2-ethylhexyl ester	85-69-8		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, butyl octyl ester	84-78-6		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, decyl hexyl ester	25724-58-7		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, decyl octyl ester	119-07-3		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	84-61-7		10/04/82	10/04/92

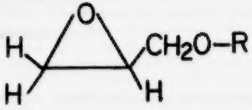
Category	CAS No. (examples for category)	Special exemptions	Effective date	Sunset date
1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, dihexyl ester	84-75-3		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, diisodecyl ester	26761-40-0		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, diisononyl ester	28553-12-0		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, diisooctyl ester	27554-26-3		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, demethyl ester	131-11-3		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, dinonyl ester	84-76-4		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, diundecyl ester	119-06-2		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, isodecyl tridecyl ester	3648-20-2		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, 2-ethylhexyl-8-methylnonyl ester	89-13-4		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, hexyl isodecyl ester	61702-81-6		10/04/82	10/04/92
1,2-Benzenedicarboxylic acid, isodecyl tridecyl ester	61886-60-0		10/04/82	10/04/92
Alkyltin compounds			01/03/83	12/29/88
Dibutyltin *S,S'*-bis(isooctyl mercaptoacetate)—Acetic acid, 2,2'-[(dibutylstannylene)bis(thio)]bis-, diisooctyl ester	25168-24-5		01/03/83	12/29/88
Dibutyltin *S,S'*-bis(isooctyl mercaptoacetate)—Acetic acid, 2,2'-[(dimethylstannylene)bis(thio)]bis-, diisooctyl ester	26636-01-1		01/03/83	12/29/88
Monomethyltin tris(isooctyl mercaptoacetate)—Acetic acid, 2,2',2''-[(methylstannylidyne)tris (thio)]tris- triisoacetyl ester	54849-38-6		01/03/83	12/29/88
Aniline and chloro-, bromo-, and/or nitroanilines			10/04/82	10/04/92
Benzenamine	62-53-3		10/04/82	10/04/92
Benzenamine, 4-bromo-	106-40-1		10/04/82	10/04/92
Benzenamine, 2-bromo-6-chloro-4-nitro-	99-29-6		10/04/82	10/04/92
Benzenamine, 2-bromo-,4,6-dinitro-	1817-73-8		10/04/82	10/04/92
Benzenamine, 2-chloro-	95-51-2		10/04/82	10/04/92
Benzenamine, 3-chloro-	108-42-9		10/04/82	10/04/92
Benzenamine, 4-chloro-	106-47-8		10/04/82	10/04/92
Benzenamine, 2-chloro-4,6-dinitro-	3531-19-9		10/04/82	10/04/92
Benzenamine, 4-chloro-2,6-dinitro-	5388-62-5		10/04/82	10/04/92
Benzenamine, 3-chloro-, hydrochloride	141-85-5		10/04/82	10/04/92
Benzenamine, 2-chloro-4-nitro-	121-87-9		10/04/82	10/04/92
Benzenamine, 2-chloro-5-nitro-	6283-25-6		10/04/82	10/04/82
Benzenamine, 4-chloro-2-nitro-	89-63-4		10/04/82	10/04/92
Benzenamine, 4-chloro-3-nitro-	635-22-3		10/04/82	10/04/92
Benzenamine, 2,6-dibromo-4-nitro-	827-94-1		10/04/82	10/04/92
Benzenamine, 2,3-dichloro-	608-27-5		10/04/82	10/04/92
Benzenamine, 2,4-dichloro-	554-00-7		10/04/82	10/04/92
Benzenamine, 2,5-dichloro-	95-82-9		10/04/82	10/04/92
Benzenamine, 3,4-dichloro-	95-76-1		10/04/82	10/04/92
Benzenamine, 3,5-dichloro-	626-43-7		10/04/82	10/04/92
Benzenamine, 2,6-dichloro-4-nitro-	99-30-9		10/04/82	10/04/92
Benzenamine, 2,4-dinitro-	97-02-9		10/04/82	10/04/92
Benzenamine, 2-nitro-	88-74-4		10/04/82	10/04/92
Benzenamine, 3-nitro-	99-09-2		10/04/82	10/04/92
Benzenamine, 4-nitro-	100-01-6		10/04/82	10/04/92
Benzenamine, 2,4,6-tribromo-	147-82-0		10/04/82	10/04/92

Benzenamine, 2,4,6-trichloro-	634-93-5		10/04/82	10/04/92
Aryl phosphates—phosphate esters of phenol or of alkyl-substituted phenols. Triaryl and mixed alkyl and aryl esters are included but trialkyl esters are excluded			10/04/82	10/04/92



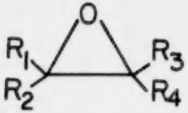
R_1=phenyl, either unsubstituted or substituted with one or more alkyl or aralkyl groups R_2=R_3 alkyl; or phenyl, either unsubstituted or substituted with one or more alkyl or aralkyl groups				
Phenol, dimethyl-, phosphate (3:1)	25155-23-1		10/04/82	10/04/92
Phenol, 4-(1,1-dimethylethyl)-, phosphate (3:1)	78-33-1		10/04/82	10/04/92
Phosphoric acid, dibutyl phenyl ester	2528-36-1		10/04/82	10/04/92
Phosphoric acid. diisodecyl phenyl ester	51363-64-5		10/04/82	10/04/92
Phosphoric acid, (1,1-dimethylethyl) phenyl diphenyl ester	56803-37-3		10/04/82	10/04/92
Phosphoric acid, 2-ethylhexyl diphenyl ester	1241-94-7		10/04/82	10/04/92
Phosphoric acid, isodecyl diphenyl ester	29761-21-5		10/04/82	10/04/92
Phosphoric acid, (1-methylethyl)phenyl diphenyl ester	28108-99-8		10/04/82	10/04/92
Phosphoric acid, methylphenyl diphenyl ester	25444-49-5		10/04/82	10/04/92
Phosphoric acid, (1-methyl-l-phenylethyl)phenyl diphenyl ester	34364-42-6		10/04/82	10/04/92
Phosphoric acid, triphenyl ester	115-86-6		10/04/82	10/04/92
Phosphoric acid, tris(methylphenyl) ester	1330-78-5		10/04/82	10/04/92
Phosphoric acid, tris(2-methylphenyl) ester	78-30-8		10/04/82	10/04/92
Phosphoric acid, tris(3-methylphenyl) ester	563-04-2		10/04/82	10/04/92
Phosphoric acid, tris(4-methylphenyl) ester	78-32-0		10/04/82	10/04/92
Asbestos—asbestiform varieties of chrysolite (serpentine); crocidolite (riebeckite); amosite (cummingtonite—grunerite); anthophyllite; tremolite; and actinolite			10/04/82	10/04/92
Asbestos	1332-21-4		10/04/82	10/04/92
Asbestiform minerals	12001-29-5		10/04/82	10/04/92
Asbestiform minerals	17068-78-9		10/04/82	10/04/92
Asbestiform minerals	12172-73-5		10/04/82	10/04/92
Bisazobiphenyl dyes derived from benzidine and its congeners, *ortho*-toluidine (dimethylbenzidine) and dianisidine (dimethoxybenzidine)			10/04/82	10/04/92
Benoic acid, 2-[[2-amino-6-[[4′-[(-carboxy-4-hydroxphenyl) azo[-3,3′-dimethoxy[1,1′-biphenyl]-4-yl]azo]-5-hydroxy-7-sulfo-1-naphthalenylazo]-5-nitro-, trisodium salt	6739-62-4		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[2-amino-8-hydroxy-6-sulfo-1-naphthalenyl) azo] [1,1′-biphenyl]-4-yl]-azo]-2-hydroxy-, disodium salt	2429-84-7		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo] [1,1′-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt	2429-82-5		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[(1-amino-4-sulfo-2-naphthalenyl)azo] [1,1′-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt	2429-79-0		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[[2,6-diamino-3-[[8-hydroxy-3,6-disulfo-7-[(4-sulfo-1-naphthalenyl)azo]-2-naphthalenyl]azo]-5-methylphenyl]azo] [1,1′-biphenyl]-4-yl]azo]-2-hydroxy-, tetrasodium salt	2429-81-4		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[(2,6-diamino-3-methyl-5-sulfophenyl)azo]-3,3′-dimethyl[1,1′-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt	6637-88-3		10/04/82	10/04/92
Benzoic acid, 5-[[4′-[[2,6-diamino-3-methyl-5-[(4-sulfophenyl)azo]phenyl]azo][1,1′-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt	2586-58-5		10/04/82	10/04/92

Category	CAS No. (examples for category)	Special exemptions	Effective date	Sunset date
Benzoic acid, 5-[[4'-[[2,6-diamino-3-methyl-5-[(4-sulfophenyl)azo]phenyl]azo]1,1'-biphenyl]-4-yl]azo]-2-hydroxy-3-methly-, disodium salt	6360-54-9		10/04/82	10/04/92
Benzoic acid, 5-[[4'-[[2,4-dihydroxy-3-[(4-sulfophenyl)azo]phenyl]azo] [1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt	2893-80-3		10/04/82	10/04/92
Benzoic acid, 3,3'-[(3,7-disulfo-1,5-naphthalene-diyl)bis[azo(6-hydroxy-3,1-phenylene)azo[6(or 7)-sulfo-4,1-naphthalenediyl]azo[1,1'-biphenyl]-4,4'-diylazo]]bis[6-hydroxy-, hexasodium salt	8014-91-3		10/04/82	10/04/92
[1,1'-Biphenyl]-4,1'-bis diazonium), 3,3'-dimethoxy-	20282-70-6		10/04/82	10/04/92
Butanamide, *N,N*-(3,3'-dimethyl [1,1'-biphenyl]-4,4'-diyl)bis[3-oxo-	91-96-3		10/04/82	10/04/92
C.I. Direct Blue 218	10401-50-0		10/04/82	10/04/92
Cuprate(2-), [5-[[4'-[[2,6-dihydroxy-3-[(2-hydroxy-5-sulfophenyl)azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxybenzoato(4-)]-, disodium	16071-86-6		10/04/82	10/04/92
Cuprate(3-), [μ-[7-[[3,3'-dihydroxy-4'-[[1-hydroxy-6-(phenylamino)-3-sulfo-2-naphthalenyl]azo] [1,1'-biphenyl]-4-yl]azo]-8-hydroxy-1,6-naphthalenedisulfonato(7-)]]di-, trisodium	6656-03-7		10/04/82	10/04/92
Cuprate(4-), [μ-[[6,6'-[3,3'-dihydroxy[1,1'-biphenyl]-4-4'-diyl)bis(azo)]bis[4-amino-5-hydroxy-1,3-naphthalendisulfonato]](8-)]]di-, tetrasodium	16143-79-6		10/04/82	10/04/92
2-Naphthalenecarboxamide, *N,N*-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[3-hydroxy-	91-92-9		10/04/82	10/04/92
1,3-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-6-[[4'-[(2hydroxy-1-naphthalenyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-, disodium salt	2586-57-4		10/04/82	10/04/92
1,3-Naphthalenedisulfonic acid, 6,6'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'diyl)bis(azo)]bis[4-amino-5-hydroxy-, tetrasodium salt	2610-05-1		10/04/82	10/04/92
1,3-Naphthalenedisulfonic acid, 8-[[4'-[(4-ethoxyphenyl)azo] [1,1'-biphenyl]-4-yl]azo]-7-hydroxy-, disodium salt	3530-19-6-		10/04/82	10/04/92
1,3-Naphthalenedisulfonic acid, 8-[[4'-[4-ethoxyphenyl)azo]-3,3'-dimethyl] [1,1'-biphenyl]-4-yl]azo]-7-hydroxy-, disodium salt	6358-29-8		10/04/82	10/04/92
1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-[[4'-[[4-[[(4-methylphenyl) sulfonyl]oxy]phenyl]-azo] [1,1'-biphenyl]-4-yl]azo]-, disodium salt	3567-65-5		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 5-amino-3-[[4'-(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)-azo] [1,1'-biphenyl]-4-yl]azo]-4-hydroxy-, trisodium salt	2429-73-4		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[(2,4-diamino-5-methylphenyl)azo] [1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)-, disodium salt	2429-83-6		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[(2,4-diaminophenyl)azo] [1,1'-biphenyl]-4-yl]azo] 5-hydroxy-6-(phenylazo)-, disodium salt	1937-37-7		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-6[[4'-[(4-hydroxyphenyl)azo] [1,1'-biphenyl]-4-yl]-azo]-3-[(4-nitrophenyl)azo]-, disodium salt	4335-09-5		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-3-[[4'-[(4-hydroxyphenyl)azo] [1,1'-biphenyl]-4-yl]azo)-6-(phenylazo)-, disodium salt	3626-28-6		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt	2602-46-2		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt	2429-74-5		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt	72-57-1		10/04/82	10/04/92
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis-[4,5-dihydroxy-, tetrasodium salt	2150-54-1		10/04/82	10/04/92
1-Naphthalenesulfonic acid, 3-[[4'[(6-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-4-hydroxy-, disodium salt	6449-35-0		10/04/82	10/04/92
1-Naphthalenesulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-diyl-4,4'-diyl)bis(azo)]bis[(4-amino-,disodium salt	573-58-0		10/04/82	10/04/92
1-Naphthalenesulfonic acid, 3,3'-[3,3'-dimethoxy-[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-hydroxy-, disodium salt	2429-71-2		10/04/82	10/04/92
1-Naphthalenesulfonic acid, 3,3'-[(3,3'dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-,disodium salt	962-59-6		10/04/82	10/04/92
Chlorinated benzenes, mono-, di-, tri-, tetra-, and penta-			10/04/82	10/04/92
Benzene, chloro-	108-90-7		10/04/82	10/04/92
Benzene, 1,2-dichloro-	95-50-1		10/04/82	10/04/92

Benzene, 1,4-dichloro-				
Benzene, pentachloro-	608-93-5		10/04/82	10/04/92
Benzene, 1,2,3,4-tetrachloro-	634-66-2		10/04/82	10/04/92
Benzene, 1,2,3,5-tetrachloro-	634-90-2		10/04/82	10/04/92
Benzene, 1,2,4,5-tetrachloro-	95-94-3		10/04/82	10/04/92
Benzene, 1,2,3-trichloro-	87-61-6		10/04/82	10/04/92
Benzene, 1,2,4-trichloro-	120-82-1		10/04/82	10/04/92
Benzene, 1,3,5-trichloro-	108-70-3		10/04/82	10/04/92
Chlorinated naphthalenes—chlorinated derivatives of naphthalene (empirical formula) $C_{10}H_xCl_y$ where x+y=8.			10/04/82	12/29/88
Naphthalene, chloro-	25586-43-0		10/04/82	12/29/88
Naphthalene, chloro derivatives	70776-03-3		10/04/82	12/29/88
Naphthalene, 1-chloro-	90-13-1		10/04/82	12/29/88
Naphthalene, heptachloro-	32241-08-0		10/04/82	12/29/88
Chlorinated paraffins—chlorinated paraffin oils and chlorinated paraffin waxes, with chlorine content of 35 percent through 70 percent by weight.			10/04/82	10/04/92
Alkanes, chloro-	61788-76-9		10/04/82	10/04/92
Alkanes, C_{6-18}, chloro-	68920-70-7		10/04/82	10/04/92
Paraffin waxes and hydrocarbon waxes, chlorinated	63449-39-8		10/04/82	10/04/92
Ethyltoluenes—This category consists of ethyltoluene (mixed isomers) and the ortho (1,2-), meta (1,3-) and para (1,4-) isomers			04/29/83	12/29/88
Benzene, 1-ethyl-2-methyl-	611-14-3		04/29/83	12/29/88
Fluoroalkenes—This category is defined as fluroalkenes of the general formula: $C_nH_{2n-x}F_x$ where n equals 2 to 3 and X equals 1 to 6.			04/29/83	04/29/93
Ethene, tetrafluoro-	116-14-3		04/29/83	04/29/93
Ethene, trifluoro-	359-11-5		04/29/83	01/13/86
1-Propene, 1,1,2,3,3,3-hexafluoro-	116-15-4		04/29/83	04/29/93
Glycidol (oxiranemethanol) and its derivatives			10/04/82	10/04/92
				
R=H; alkyl, alkenyl or alkynyl; aryl; acyl. where R=alkyl, alkenyl, alkynyl, aryl, or acyl; any substituents or functional groups may be present with the alkyl, etc., groups				
1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester	5493-45-8		10/04/82	10/04/92
Disiloxane, 1,1,3,3-tetramethyl-1,3-bis[3-oxiranylmethoxy)propyl]-	126-80-7		10/04/82	10/04/92
2,4-Imidazolidinedione, 5,5-dimethyl-3-[2-(oxiranylmethoxy)propyl]-1-(oxiranylmethyl)-	32568-89-1		10/04/82	10/04/92
2,4-Imidazolidenedione, 3,3′-[2-(oxiranylmethoxy)-1,3-propanediyl]bis[5,5-dimethyl-1-(oxiranyl-methyl)-	38304-52-8		10/04/82	10/04/92
Neodecanoic acid, oxiranylmethyl ester	26761-45-5		10/04/82	10/04/92
Oxirane, 2,2′-[1,4-butanediylbis(oxymethylene)]bis	2425-79-8		10/04/82	10/04/92
Oxirane, (butoxymethyl)-	2426-08-6		10/04/82	10/04/92

Category	CAS No. (examples for category)	Special exemptions	Effective date	Sunset date
Oxirane, 2,2'-[1,4-cyclohexanedibis (methyleneoxymethylene)]bis-	14228-73-0		10/04/82	10/04/92
Oxirane, [(2,4-dibromophenoxy)methyl]-	20217-01-0		10/04/82	10/04/92
Oxirane, [(1,2-dibromopropoxy)methyl]-	35243-89-1		10/04/82	10/04/92
Oxirane, [(1,1-dimethylethoxy)methyl]-	7665-72-7		10/04/82	10/04/92
Oxirane, [[4-(1,1-dimethylethyl)phenoxy]methyl]-	3101-60-8		10/04/82	10/04/92
Oxirane, 2,2'-[(2,2-dimethyl 1,3-propanediyl)bis(oxymethylene)]bis-	17557-23-2		10/04/82	10/04/92
Oxirane, [(dodecyloxy)methyl]-	2461-18-9		10/04/82	10/04/92
Oxirane, 2,2'-[1,2-ethanediylbis (oxymethylene)]bis-	2224-15-9		10/04/82	10/04/92
Oxirane, 2,2',2'',2'''-[1,2-ethanediylidenetetrakis-(4,1-phenyleneoxymethylene)]tetrakis-	7328-97-4		10/04/82	10/04/92
Oxirane, (ethoxymethyl)-	4016-11-9		10/04/82	10/04/92
Oxirane, [[(2-ethylhexyl)oxy]methyl]-	2461-15-6		10/04/82	10/04/92
Oxirane, [(hexadecyloxy)methyl]-	15965-99-8		10/04/82	10/04/92
Oxirane, 2,2',2''-[1,2,6-hexanetriyltris-(oxymethylene)]tris-	68959-23-9		10/04/82	10/04/92
Oxirane, (methoxymethyl)-	930-37-0		10/04/82	10/04/92
Oxirane, 2,2'-[methylenebis(phenyleneoxymethylene)]bis-	39817-09-9		10/04/82	10/04/92
Oxirane, 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis-	54208-63-8		10/04/82	10/04/92
Oxirane, [(1-methylethoxy)methyl]-	4016-14-2		10/04/82	10/04/92
Oxirane, 2,2'-[(1-methylethylidene)bis[4,1-phenyl-eneoxy[1-(butoxymethyl)-2,1-ethanediyl]oxymethylene]]bis-	71033-08-4		10/04/82	10/04/92
Oxirane, 2,2'-[1-methylethylidene) bis(4,1-phenyl-eneoxymethylene)]bis-	1675-54-3		10/04/82	10/04/92
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyl-eneoxymethylene)[bis-, homopolymer	25085-99-8		10/04/82	10/04/92
Oxirane, 2,2'-[(1-methylethylidene)bis[4,1-phenyleneoxy-3,1-propanediyloxy-4,1-phenylene(1-methylethylidene)-4,1-phenyleneoxymethylene]]bis-	72319-24-5		10/04/82	10/04/92
Oxirane, [(methylphenoxy)methyl]-	26447-14-3		10/04/82	10/04/92
Oxirane, [(2-methylphenoxy)methyl]-	2210-79-9		10/04/82	10/04/92
Oxirane, [[4-(1-methyl-1-phenylethyl)phenoxy}-methyl]-	61578-04-9		10/04/82	10/04/92
Oxirane, mono[C_8-C_{12}-alkyloxy)methyl]derivatives	68987-80-4		10/04/82	10/04/92
Oxirane, mono[(C_8-C_{12}-alkyloxy)methyl]derivatives	68609-96-1		10/04/82	10/04/92
Oxirane, mono[C_{10}-C_{16}-alkyloxy)methyl]derivatives	68081-84-5		10/04/82	10/04/92
Oxirane, mono[(C_{10}-C_{14}-alkyloxy)methyl]derivatives	68609-97-2		10/04/82	10/04/92
Oxirane, [(4-nitrophenoxy)methyl]-	5255-75-4		10/04/82	10/04/92
Oxirane, [(4-nonylphenoxy)methyl]-	6178-32-1		10/04/82	10/04/92
Oxirane, [(9-octadecenyloxy)methyl]-, (*Z*)-	60501-41-9		10/04/82	10/04/92
Oxirane, [(octadecyloxy)methyl]-	16245-97-9		10/04/82	10/04/92
Oxirane, 2,2'-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bis-	13561-08-5		10/04/82	10/04/92
Oxirane, 2,2'-[[[2-oxiranylmethyoxy) phenyl]methylene]bis(4,1-phenyl-eneoxymethylene)]bis-	67786-03-2		10/04/82	10/04/92
Oxirane, 2,2'-[oxybis(methylene)]bis-	2238-07-5		10/04/82	10/04/92
Oxirane, (phenoxymethyl)-	122-60-1		10/04/82	10/04/92
Oxirane, 2,2'-[1,3-phenylenebis (oxymethylene)]bis-	2425-01-6		10/04/82	10/04/92
Oxirane, 2,2'-[1,4-phenylenebis (oxymethylene)]bis-	101-90-6		10/04/82	10/04/92
Oxirane, 2,2',2''-[1,2,3-propanetriyl tris(oxymethylene)]tris-	13236-02-7		10/04/82	10/04/92
Oxirane, [(2-propenyloxy)methyl]-	106-92-3		10/04/82	10/04/92
Oxirane, 2,2',2''-[propylidynetris (4,1-phenyleneoxymethylene)]tris-	68517-02-2		10/04/82	10/04/92
Oxirane, [(tetradecyloxy)methyl]-	38954-75-5		10/04/82	10/04/92

Poly(oxy-1,2-ethanediyl), α-[4-oxiranylmethyoxy)benzoyl]-ω-[[4-oxiranylmethoxy)benzoyl]oxy]-				
2-Propenoic acid, 2-methyl-, oxiranylmethyl ester	106-91-2		10/04/82	10/04/92
2-Propenoic acid, oxiranylmethyl ester	106-90-1		10/04/82	10/04/92
Silane, [(3-chloropropyl)(dimethoxy)[3-(oxiranylmethoxy)propyl]-	71808-64-5		10/04/82	10/04/92
Silane, diethoxymethyl[3-(oxiranyl-methoxy)propyl]-	2897-60-1		10/04/82	10/04/92
Silane, ethoxydimethyl[3-(oxiranyl-methoxy)propyl]-	17963-04-1		10/04/82	10/04/92
Silane, trimethyoxy[3-(oxiranyl-methoxy)propyl]-	2530-83-8		10/04/82	10/04/92
Tetrasiloxane, 1,1,1,3,5,7,7,7-octamethyl-3,5-bis[3-(oxiranylmethoxy)propyl]-	69155-42-6		10/04/82	10/04/92
Trisiloxane, 1,1,1,3,5,5,5-heptamethyl-3-[3-(oxiranyl-methoxy)propyl]-	7422-52-8		10/04/82	10/04/92
Halogenated alkyl epoxides—halogenated noncyclic aliphatic hydrocarbons with one or more epoxy functional groups.			10/04/82	12/29/88



$R_1 = X$ or $C_nH_{2n+1-y}X_y (y = 1$ to $1n+1)$				
$R_2 = H$ or X or $C_nH_{2n+1-y}X_y (y = 0$ to $2n+1)$				
$R_3 = H$ or X or $C_nH_{2n+1-y}X_y (y = 0$ to $2n+1)$				
$R_4 = H$ or X or $C_nH_{2n+1-y}X_y (y = 0$ to $2n+1)$				
X = halogen. Groups R_1–R_4 may contain one or more expoxide functions.				
Oxirane, (bromomethyl)-	3132-463-7		10/04/82	12/29/88
Oxirane, (2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl)-	38565-52-5		10/04/82	12/29/88
Phenylenediamines (Benzenediamines). This category is defined as all nitrogen unsubstituted phenylenediamines and their salts with zero to two substitutents on the ring selected from the same of different members of the group of halo, nitro, hydroxy, hydroxy-lower alkoxy, lower-alkyl, and lower alkoxy. For this purpose, the term "lower" is defined as a group containing between one and four carbons			04/29/83	04/29/93
1,2-Benzenediamine	95-54-5		04/29/83	04/29/93
1,3-Benzenediamine	108-45-2		04/29/83	04/29/93
1,2-Benzenediamine, 4-butyl-	3663-23-8		04/29/83	12/29/88
1,2-Benzenediamine, 4-butyl-	95-83-0		04/29/83	04/29/83
1,3-Benzenediamine, 4-chloro-	5131-60-2		04/29/83	04/29/93
1,4-Benzenediamine, 2-chloro-, dihydrochloride	615-46-3		04/29/83	12/29/88
1,2-Benzenediamine, 5-chloro-3-nitro-	042389-30-0		04/29/83	12/29/88
1,2-Benzenediamine, 4-chloro-, sulfate (1:1)	68459-98-3		04/29/83	12/29/88
1,3-Benzenediamine, 4-chloro-, sulfate (1:1)	68239-80-5		04/29/83	12/29/88
1,4-Benzenediamine, 2-chloro-, sulfate	6219-71-2		04/29/83	12/29/88
1,4-Benzenediamine, 2,5-dichloro-	20103-09-7		04/29/83	12/29/88
1,2-Benzenediamine, dihydrochloride	615-28-1		04/29/83	04/29/93
1,3-Benzenediamine, dihydrochloride	541-69-5		04/29/83	04/29/93
1,4-Benzenediamine, dihydrochloride	624-18-0		04/29/83	04/29/93
1,4-Benzenediamine, ethanedioate (1:1)	62654-17-5		04/29/83	04/29/93
1,2-Benzenediamine, 4-ethoxy-	1197-37-1		04/29/83	12/29/88

Category	CAS No. (examples for category)	Special exemptions	Effective date	Sunset date
1,3-Benzenediamine, 4-ethoxy-dihydrochloride	67801-06-3		04/29/83	12/29/88
1,3-Benzenediamine, 4-ethoxy-, sulfate (1:1)	68015-98-5		04/29/83	12/29/88
1,3-Benzenediamine, *ar*-ethyl-*ar*-methyl-	68966-84-7		04/29/83	12/29/88
1,4-Benzenediamine, 2-methoxy	5307-02-8		04/29/83	04/29/93
1,2-Benzenediamine, 4-methoxy-, dihydrochloride	614-94-8		04/29/83	12/29/88
1,3-Benzenediamine, 4-methoxy-, sulfate	6219-67-6		04/29/83	12/29/88
1,3-Benzenediamine, 4-methoxy-, sulfate (1:1)	39156-41-7		04/29/83	04/29/93
Benzenediamine, *ar*-methyl-	25376-45-8		04/29/83	04/29/93
1,2-Benzenediamine, 3-methyl-	2687-25-4		04/29/83	04/29/93
1,2-Benzenediamine, 4-methyl-	496-72-0		04/29/83	04/29/93
1,3-Benzenediamine, 2-methyl-	823-40-5		04/29/83	04/29/93
1,3-Benzenediamine, 4-methyl-	95-80-7		04/29/83	04/29/93
1,3-Benzenediamine, 5-methyl-	108-71-4		04/29/83	04/29/93
1,4-Benzenediamine, 2-methyl-	95-70-5		04/29/83	04/29/93
1,4-Benzenediamine, 2-methyl-, dihydrochloride-	615-45-2		04/29/83	04/29/93
1,4-Benzenediamine, 2-methyl-, sulfate	6369-59-1		04/29/83	04/29/93
1,4-Benzenediamine, 2-methyl-, sulfate (1:1)	615-50-9		04/29/83	04/29/93
1,2-Benzenediamine, 4-nitro-	99-56-9		04/29/83	04/29/93
1,3-Benzenediamine, 4-nitro-,	5131-58-8		04/29/83	12/29/88
1,3-Benzenediamine, 5-nitro-,	5042-55-7		04/29/83	12/29/88
1,4-Benzenediamine, 2-nitro-,	5307-14-2		04/29/83	04/29/93
1,2-Benzenediamine, 4-nitro-, dihydrochloride	6219-77-8		04/29/83	12/29/88
1,4-Benzenediamine, 2-nitro-, dihydrochloride	18266-52-9		04/29/83	12/29/88
1,2-Benzenediamine, 4-nitro-, sulfate (1:1)	68239-82-7		04/29/83	12/29/88
1,4-Benzenediamine, 2-nitro-, sulfate (1:1)	68239-83-8		04/29/83	12/29/88
1,3-Benzenediamine, sulfate (1:1)	541-70-8		04/29/83	04/29/93
1,4-Benzenediamine, sulfate (1:1)	16245-77-5		04/29/83	04/29/93
Ethanol, 2-(2,4-diaminophenoxy)-, dihydrochloride	66422-95-5		04/29/83	12/29/88
Phenol, 2,4-diamino-, dihydrochloride	137-09-7		04/29/83	04/29/93
Phenol, 2,4-diamino-6-methyl-	15872-73-8		04/29/83	12/29/88
Phenol, 2,4-diamino-6-methyl-, hydrochloride	65879-44-9		04/29/83	12/29/88

(Approved by the Office of Management and Budget under OMB control number 2070-0004)

[53 FR 38645, Sept. 30, 1988; 53 FR 45656, Nov. 10, 1988, as amended at 53 FR 46281, Nov. 16, 1988; 53 FR 49966, Dec. 12, 1988; 54 FR 617, Jan. 9, 1989; 54 FR 8488, Feb. 28, 1989; 54 FR 51134, Dec. 12, 1989]

PART 717—RECORDS AND REPORTS OF ALLEGATIONS THAT CHEMICAL SUBSTANCES CAUSE SIGNIFICANT ADVERSE REACTIONS TO HEALTH OR THE ENVIRONMENT

Subpart A—General Provisions

Sec.

717.1 Scope and compliance.
717.3 Definitions.
717.5 Persons subject to this part.
717.7 Persons not subject to this part.
717.10 Allegations subject to this part.
717.12 Significant adverse reactions that must be recorded.
717.15 Recordkeeping requirements.
717.17 Inspection and reporting requirements.
717.19 Confidentiality.

AUTHORITY: 15 U.S.C. 2607(c).

SOURCE: 48 FR 38187, Aug. 22, 1983, unless otherwise noted.

Subpart A—General Provisions

§ 717.1 Scope and compliance.

Section 8 (c) of the Toxic Substances Control Act (TSCA) requires manufacturers, processors, and distributors of chemical substances and mixtures:

(a) To keep "records of significant adverse reactions to health or the environment, as determined by the Administrator by rule, alleged to have been caused by the substance or mixture."

(b) To "permit inspection and submit copies of such records", upon request of any designated representative of the Administrator. This rule implements section 8(c) of TSCA. It describes the records to be kept and prescribes the conditions under which certain firms must submit or make the records available to a duly designated representative of the Administrator.

§ 717.3 Definitions.

The definitions set forth in section 3 of TSCA and the following definitions apply to this part:

(a) "Allegation" means a statement, made without formal proof or regard for evidence, that a chemical substance or mixture has caused a significant adverse reaction to health or the environment.

(b) "Firm" or "company" means any person, that is subject to this part, as defined in § 717.5.

(c)(1) "Known human effects" means a commonly recognized human health effect of a particular substance or mixture as described either in:

(i) Scientific articles or publications abstracted in standard reference sources.

(ii) The firm's product labeling or material safety data sheets (MSDS).

(2) However, an effect is not a "known human effect" if it:

(i) Was a significantly more servere toxic effect than previously described.

(ii) Was a manifestation of a toxic effect after a significantly shorter exposure period or lower exposure level than described.

(iii) Was a manifestation of a toxic effect by an exposure route different from that described.

(d) "Manufacture" or "process" means to manufacture or process for commercial purposes.

(e)(1) "Manufacture for commercial purposes" means to import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes, among other things, such "manufacture" of any amount of a chemical substance or mixture:

(i) For distribution in commerce, including for test marketing.

(ii) For use by the manufacturer, including use for product research and development, or as an intermediate.

(2) "Manufacture for commercial purposes" also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including both byproducts that are separated from that other substances or mixture and impurities that remain in that substance or mixture. Such byproducts and impurities may, or may not, in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose.

(f) "Person" includes any individual, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity, any State or political subdivision thereof, and any department, agency, or instrumentally of the Federal Government.

(g) "Process for commercial purposes" means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce with the purpose of obtaining an immediate or eventual commercial advantage for the processor. Processing of any amount of a chemical substance or mixture is included. If a chemical substance or mixture containing impurities is processed for commercial purposes, then those impurities are also processed for commercial purposes.

(h) "Retailer" means a person who distributes in commerce a chemical substance, mixture, or article to ultimate purchasers who are not commercial entities.

(i) "Significant adverse reactions" are reactions that may indicate a substantial impairment of normal activities, or long-lasting or irreversible damage to health or the environment.

(j) "Site" means a contiguous property unit. Property divided only by a public right-of-way is considered one site. There may be multiple manufacturing, processing, or distribution activities occurring within a single site.

(k) "Substance" means a chemical substance or mixture unless otherwise indicated.

§ 717.5 Persons subject to this part.

(a) *Manufacturers.* (1) All manufacturers of chemical substances are subject to this part except as provided in § 717.7(a). If manufacture of a chemical substance occurs at any site owned or controlled by a firm then that firm is subject to this part.

(2) A manufacturer must collect:

(i) Any allegation identifying a chemical substance it manufactures and any allegation identifying the operations in the manufacture of any chemical substance it manufactures.

(ii) Any allegation identifying any of its own processing or distribution in commerce activities with respect to any chemical substance it manufactures.

(iii) Any allegation identifying e sions, effluents, or other discha from activities described in this p graph.

(iv) Any allegation identifying a s stance produced coincidentally dur processing, use, storage or disposal a chemical substance it manufactu

(3) For the purpose of this p owned or controlled means owner of 50 percent or more of a fir voting stock or other equity rights the power to control the managem and policies of that firm.

(b) *Processors.* (1) A person w processes chemical substances, who not also a manufacturer of th chemical substances, is subject to t Part if (i) the person processes che cal substances to produce mixtures, (ii) the person repackages chemi substances or mixtures.

(2) As a processor subject to t part such person must collect:

(i) Any allegation identifying mixture it produces and distributes commerce and any allegation identi ing any chemical substance or mixt it repackages and distributes in c merce.

(ii) Any allegation identifying any its own further processing or distri tion in commerce activities of products described in paragr (b)(2)(i) of this section.

(iii) Any allegation identifying e sions, effluents, or other dischar from activities described in this p graph.

(iv) Any allegation identifying a stance produced coincidentally du the processing, use, storage or disp of the products described in paragr (b)(2)(i) of this section.

(c) *SIC code.* SIC codes applicabl this part are published in Standard dustrial Classification Manual– and the 1977 Supplement. manual and supplement may be tained from the U.S. Governm Printing Office, Washington, 20402—stock number 4101-0006 stock number 003-005-0170-0 res tively. Where there is a conflict tween the SIC code use of a term the definition of that term in part, the definition in this part plies.

[48 FR 38187, Aug 22, 1983, as amended at 50 FR 46769, Nov. 13, 1985]

§ 717.7 Persons not subject to this part.

(a) *Manufacturers.* (1) Persons or site activities are exempt from this part if the means by which they manufacture a chemical substance solely involves mining or other solely extractive functions, e.g., those companies or sites within a company whose sole function is to mine mineral ores, extract petroleum or natural gas, quarry non-metallic minerals (including extraction of salts from seawater or brines), mine or otherwise extract coal, or separate gases from the atmosphere. This exemption may include, but is not necessarily limited to, firms engaged in activities as described in SIC Division B—Mining and SIC Code 2813—Industrial Gases.

(2) A person is not subject to this part if the chemical substances that person causes to be produced are limited to:

(i) Chemical substances that result from chemical reactions that occur incidental to exposure of another chemical substance, mixture, or article to environmental factors such as air, moisture, microbial organisms, or sunlight.

(ii) Chemical substances that result from chemical reactions that occur incidental to storage or disposal of other chemical substances, mixtures, or articles.

(iii) Chemical substances that result from chemical reactions that occur upon end use of other chemical substances, mixtures, or articles such as adhesives, paints, miscellaneous cleaners or other housekeeping products, fuel additives, water softening and treatment agents, photographic films, batteries, matches, or safety flares, and that are not themselves manufactured or imported for distribution in commerce for use as chemical intermediates.

(iv) Chemical substances that result from chemical reactions that occur upon use of curable plastic or rubber molding compounds, inks, drying oils, metal finishing compounds, adhesives, or paints, or other chemical substance formed during the manufacture of an article destined for the marketplace without further chemical change of the chemical substance.

(v) Chemical substances that result from chemical reactions that occur when (A) a stabilizer, colorant, odorant, antioxidant, filler, solvent, carrier, surfactant, plasticizer, corrosion inhibitor, antifoamer or defoamer, dispersant, precipitation-inhibitor, binder, emulsifier, deemulsifier, dewatering agent, agglomerating agent, adhesion promoter, flow modifier, pH adjuster, sequestrant, coagulant, flocculant, fire retardant, lubricant, chelating agent, or quality control reagent functions as intended, or (B) a chemical substance, which is intended solely to impart a specific physicochemical characteristic, functions as intended.

(b) [Reserved]

(c) *Sole distributors.* A person solely engaged in the distribution of chemical substances is exempt from this part, unless such person is also a manufacturer or processor subject to this part. For example, a "distributor" who repackages chemical substances or mixtures is considered to be a processor and, thus, is not a sole distributor. Sole distributors may include, but are not limited to, those firms that distribute chemical substances as described in the wholesale trade SIC codes 5161—Chemicals and Allied Products, 5171—Petroleum Bulk Stations and Terminals, and 5172—Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals.

(d) *Retailers.* A person who is a retailer is exempt from this part unless such person is also a manufacturer or a processor subject to this part.

[48 FR 38187, Aug 22, 1983, as amended at 50 FR 46770, Nov. 13, 1985]

§ 717.10 Allegations subject to this part.

(a) Allegations subject to this part are those allegations received on or after November 21, 1983 by persons subject to this part.

(b) Allegations subject to this part are those that:

(1) Are submitted either in writing and are signed by the alleger, or are submitted orally. In the case of an oral allegation, the firm must transcribe the allegation into written form, or it must inform the alleger that such alle-

gation may be subject to this part and request that the alleger submit such allegation to the firm in writing and signed.

(2) Implicate a substance that caused the stated significant adverse reaction by one of the following:

(i) Naming the specific substance.

(ii) Naming a mixture that contains a specific substance.

(iii) Naming an article that contains a specific substance.

(iv) Naming a company process or operation in which substances are involved.

(v) Identifying an effluent, emission, or other discharge from a site of manufacturing, processing or distribution of a substance.

(c) Allegations subject to this part may be made to a firm by any person, such as an employee of the firm, individual consumer, a neighbor of the firm's plant, another firm on behalf of its employees or an organization on behalf of its members.

(d) EPA intends that firms should, to the maximum practical extent, provide allegers with information regarding the ultimate disposition of their allegations. For example, firms could provide a brief notice to the alleger stating that a record was created under this part based upon their allegation, or that a record was not created and briefly explain the reasons why not.

§ 717.12 Significant adverse reactions that must be recorded.

(a) Except as provided in paragraph (b) of this section, significant adverse reactions to human health that must be recorded include but are not limited to:

(1) Long-lasting or irreversible damage, such as cancer or birth defects.

(2) Partial or complete impairment of bodily functions, such as reproductive disorders, neurological disorders or blood disorders.

(3) An impairment of normal activities experienced by all or most of the persons exposed at one time.

(4) An impairment of normal activities which is experienced each time an individual is exposed.

(b) Firms are not required to rec significant adverse reactions that known human effects as defined § 717.3(c).

(c) Except as provided in paragr (d) of this section, significant adve reactions to the environment t must be recorded, even if restricted the environs of a plant or disposal s include but are not limited to:

(1) Gradual or sudden changes the composition of animal life or pl life, including fungal or microbial ganisms, in an area.

(2) Abnormal number of deaths organisms (e.g., fish kills).

(3) Reduction of the reproduc success or the vigor of a species.

(4) Reduction in agricultural proc tivity, whether crops or livestock.

(5) Alterations in the behavior distribution of a species.

(6) Long lasting or irreversible tamination of components of physical environment, especially the case of ground water, and surf water and soil resources that have ited self-cleansing capability.

(d) Firms are not required to rec a significant adverse reaction to environment if the alleged cause that significant adverse reaction be directly attributable to an acci tal spill or other accidental discha emission exceeding permitted lin or other incident of environme contamination that has been repo to the Federal Government under applicable authority.

(Approved by the Office of Manager and Budget under control number 0017)

[48 FR 38187, Aug. 22, 1983, as amende 49 FR 23183, June 5, 1984]

§ 717.15 Recordkeeping requirements.

(a) *Establishment and locatio records.* A firm subject to this shall establish and maintain recor significant adverse reactions allege have been caused by chemical stances or mixtures manufacture processed by the firm. Such rec shall be kept at the firm's headq ters or at any other appropriate tion central to the firm's chemica erations.

(b) *Content of records.* The record shall consist of the following:

(1) The original allegation as received.

(2) An abstract of the allegation and other pertinent information as follows:

(i) The name and address of the plant site which received the allegation.

(ii) The date the allegation was received at that site.

(iii) The implicated substance, mixture, article, company process or operation, or site discharge.

(iv) A description of the alleger (e.g., "company employee," "individual consumer," "plant neighbor"). If the allegation involves a health effect, the sex and year of birth of the individual should be recorded, if ascertainable.

(v) A description of the alleged health effect(s). The description must relate how the effect(s) became known and the route of exposure, if explained in the allegation.

(vi) A description of the nature of the alleged environmental effect(s), identifying the affected plant and/or animal species, or contaminated portion of the physical environment.

(3) The results of any self-initiated investigation with respect to an allegation. (EPA does not require persons subject to this part to investigate allegations received, and no provision of this part shall be construed to imply that EPA recommends, encourages or requires such investigation.)

(4) Copies of any further required records or reports relating to the allegation. For example, if an employee allegation results in a requirement for the firm to record the case on Occupational Safety and Health Form 101 or appropriate substitute (see 29 CFR Part 1904 for requirements under the Occupational Safety and Health Act of 1970), a copy of that OSHA record must be included in the allegation record.

(c) *File structure.* Records must be retrievable by the alleged cause of the significant adverse reaction, which cause may be one of the following:

(1) A specific chemical identity.

(2) A mixture.

(3) An article.

(4) A company process or operation.

(5) A site emission, effluent or other discharge.

(d) *Retention period.* Records of significant adverse reactions to the health of employees shall be retained for a period of 30 years from the date such reactions were first reported to or known by the person maintaining such records. This provision requires persons subject to this part to retain for 30 years an employee health related allegation, arising from any employment related exposure, whether or not such allegation was submitted by or on the behalf of that recordkeeper's own employee. Any other record of significant adverse reactions shall be maintained for a period of five years from the date the information contained in the record was first reported to or known by the person maintaining the record.

(e) *Transfer of records.* (1) If a firm ceases to do business, the successor must receive and keep all the records that must be kept under this part.

(2) If a firm ceases to do business and there is no successor to receive and keep the records for the prescribed period, these records must be transmitted to EPA. See § 717.17(c) for the address to which such records must be sent.

(Approved by the Office of Management and Budget under control number 2070-0017)

[48 FR 38187, Aug. 22, 1983, as amended at 49 FR 23183, June 5, 1984]

§ 717.17 Inspection and reporting requirements.

(a) *Inspection.* Firms must make records of allegations available for inspection by any duly designated representative of the Administrator.

(b) *Reporting.* Each person who is required to keep records under this part must submit copies of those records to the Agency as required by the EPA Administrator or appropriate designee. EPA will notify those responsible for reporting by letter or will announce any such requirements for submitting copies of records by a notice in the FEDERAL REGISTER. Such letter or notice will be signed by the Administrator or appropriate designee, and will specify which records or portion of records must be submitted. The reporting period will be specified by the letter or notice but in no case will such reporting period be less than 45 days from the date of the letter or the effective date of the notice.

(c) *How to report.* When required to report, firms must submit copies of records (preferably by certified mail) to: Document Processing Center (TS-790) Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. ATTN: 8(c) Allegations.

(Approved by the Office of Management and Budget under control number 2070-0017)

[48 FR 38187, Aug. 22, 1983, as amended at 49 FR 23183, June 5, 1984; 52 FR 20084, May 29, 1987; 53 FR 12523, Apr. 15, 1988]

§ 717.19 Confidentiality.

(a) Any person submitting copies of records may assert a business confidentiality claim covering all or part of the submitted information. Any information covered by a claim will be disclosed by EPA only as provided in procedures set forth at Part 2 of this title.

(b) If no claim accompanies a document at the time it is submitted to EPA, the document will be placed in an open file available to the public without further notice to the respondent.

(c) To asset a claim of confidentiality for information contained in a submitted record, the respondent must submit two copies of the document.

(1) One copy must be complete. In that copy, the respondent must indicate what information, if any, is claimed as confidential by marking the specific information on each page with a label such as "confidential", "proprietary", or "trade secret" and briefly state the basis of the claim.

(2) If some information is claimed as confidential, the respondent must submit a second copy of the record. The second copy must be complete, except that all information claimed as confidential in the first copy must be deleted.

(3) The first copy will be for internal use by EPA. The second copy will be placed in an open file to be available to the public.

(4) Failure to furnish a second cop when information is claimed as confidential in the first copy will be considered a presumptive waiver of the clai of confidentiality. EPA will notify th respondent by certified mail that finding of a presumptive waiver of th claim of confidentiality has bee made. The respondent will be given 3 days from the date of receipt of notification to submit the required secon copy. If the respondent fails to submi the second copy within the 30 day EPA will place the first copy in th public file.

PART 720—PREMANUFACTURE NOTIFICATION

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APPENDIX A—PREMANUFACTURE NOTICE FOR NEW CHEMICAL SUBSTANCES

AUTHORITY: 15 U.S.C. 2604, 2607, and 2613.

SOURCE: 48 FR 21742, May 13, 1983, unless otherwise noted.

Subpart A—General Provisions

§ 720.1 Scope.

This part establishes procedures for the reporting of new chemical substances by manufacturers and importers under section 5 of the Toxic Substances Control Act, 15 U.S.C. 2604. The rule defines the persons and chemical substances subject to the reporting requirements, prescribes the contents of section 5 notices, and establishes procedures for submitting notices. The rule also establishes EPA policy regarding claims of confidentiality for, and public disclosure of, various categories of information submitted in connection with section 5 notices.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.3 Definitions.

(a)(1) For the purposes of this part, the terms "cosmetic," "device," "drug," "food," and "food additive" have the meanings contained in the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321 *et seq.*, and the regulations issued under it. In addition, the term "food" includes poultry and poultry products, as defined in the Poultry Products Inspection Act, 21 U.S.C. 453 *et seq.;* meats and meat food products, as defined in the Federal Meat Inspection Act, 21 U.S.C. 60 *et seq.;* and eggs and egg products, as defined in the Egg Products Inspection Act, 21 U.S.C. 1033 *et seq.*

(2) The term "pesticide" has the meaning contained in the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 136 *et seq.* and the regulations issued under it.

(3) The terms "byproduct material," "source material," and "special nuclear material" have the meanings contained in the Atomic Energy Act of 1954, 42 U.S.C 2014 *et seq.* and the regulations issued under it.

(b) "Act" means the Toxic Substances Control Act, 15 U.S.C. 2601 *et seq.*

(c) "Article" means a manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article and that may occur as described in § 720.36(g)(5), except that fluids and particles are not considered articles regardless of shape or design.

(d) "Byproduct" means a chemical substance produced without a separate commercial intent during the manufacture, processing, use, or disposal of another chemical substance or mixture.

(e) "Chemical substance" means any organic or inorganic substance of a particular molecular identity, including any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature, and any chemical element or uncombined radical, except that "chemical substance" does not include:

(1) Any mixture.

(2) Any pesticide when manufactured, processed, or distributed in commerce for use as a pesticide.

(3) Tobacco or any tobacco product.

(4) Any source material, special nuclear material, or byproduct material.

(5) Any pistol, firearm, revolver, shells, or cartridges.

(6) Any food, food additive, drug, cosmetic, or device, when manufac-

tured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

(f) "Commerce" means trade, traffic, transportation, or other commerce (1) between a place in a State and any place outside of such State, or (2) which affects trade, traffic, transportation, or commerce between a place in a State and any place outside of such State.

(g) "Customs territory of the United States" means the 50 States, Puerto Rico, and the District of Columbia.

(h) "Director" means the Director of the EPA Office of Toxic Substances.

(i) "Distribute in commerce" means to sell in commerce, to introduce or deliver for introduction into commerce, or to hold after introduction into commerce.

(j) "EPA" means the U.S. Environmental Protection Agency.

(k) "Health and safety study" or "study" means any study of any effect of a chemical substance or mixture on health or the environment or on both, including underlying data and epidemiological studies, studies of occupational exposure to a chemical substance or mixture, toxicological, clinical, and ecological, or other studies of a chemical substance or mixture, and any test performed under the Act. Chemical identity is always part of a health and safety study.

(1) Not only is information which arises as a result of a formal, disciplined study included, but other information relating to the effects of a chemical substance or mixture on health or the environment is also included. Any data that bear on the effects of a chemical substance on health or the environment would be included.

(2) Examples include:

(i) Long- and short-term tests of mutagenicity, carcinogenicity, or teratogenicity; data on behavioral disorders; dermatoxicity; pharmacological effects; mammalian absorption, distribution, metabolism, and excretion; cumulative, additive, and synergistic effects; acute, subchronic, and chronic effects; and structure/activity analyses.

(ii) Tests for ecological or other environmental effects on invertebrates, fish, or other animals, and plants, including: Acute toxicity tests, chroni toxicity tests, critical life stage tes behavioral tests, algal growth tes seed germination tests, plant grow or damage tests, microbial functio tests, bioconcentration or bioaccum lation tests, and model ecosystem (m crocosm) studies.

(iii) Assessments of human and env ronmental exposure, including wor place exposure, and impacts of a pa ticular chemical substance or mixtu on the environment, including survey tests, and studies of: Biological, phot chemical, and chemical degradatio air, water, and soil transport; bioma nification and bioconcentration; an chemical and physical properties, e. boiling point, vapor pressure, evapor tion rates from soil and water, oct nol/water partition coefficient, a water solubility.

(iv) Monitoring data, when th have been aggregated and analyzed measure the exposure of humans the environment to a chemical su stance or mixture.

(v) Any assessments of risk to heal and the environment resulting fro the manufacture, processing, distrib tion in commerce, use, or disposal the chemical substance.

(l) "Importer" means any pers who imports a chemical substance, cluding a chemical substance as p of a mixture or article, into the c toms territory of the United Stat "Importer" includes the person p marily liable for the payment of a duties on the merchandise or an thorized agent acting on his or h behalf. The term also includes, as propriate:

(1) The consignee.

(2) The importer of record.

(3) The actual owner if an act owner's declaration and supersedi bond has been filed in accordance wi 19 CFR 141.20; or

(4) The transferee, if the right draw merchandise in a bonded wa house has been transferred in acco ance with Subpart C of 19 CFR P 144. (See "principal importer.")

(m) "Impurity" means a chemi substance which is unintentiona present with another chemical s stance.

(n) "Intermediate" means any chemical substance that is consumed, in whole or in part, in chemical reactions used for the intentional manufacture of another chemical substance(s) or mixture(s), or that is intentionally present for the purpose of altering the rates of such chemical reactions.

(o) "Inventory" means the list of chemical substances manufactured or processed in the United States that EPA compiled and keeps current under section 8(b) of the Act.

(p) "Known to or reasonably ascertainable by" means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.

(q) "Manufacture" means to produce or manufacture in the United States or import into the customs territory of the United States.

(r) "Manufacture or import for commercial purposes" means:

(1) To import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer or importer, and includes, among other things, "manufacture" of any amount of a chemical substance or mixture:

(i) For commercial distribution, including for test marketing.

(ii) For use by the manufacturer, including use for product research and development or as an intermediate.

(2) The term also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including byproducts that are separated from that other substance or mixture and impurities that remain in that substance or mixture. Byproducts and impurities without separate commercial value are nonetheless produced for the purpose of obtaining a commercial advantage, since they are part of the manufacture of a chemical substance for commercial purposes.

(s) "Manufacture solely for export" means to manufacture or import for commercial purposes a chemical substance solely for export from the United States under the following restrictions on activities in the United States:

(1) Distribution in commerce is limited to purposes of export or processing solely for export as defined in § 721.3 of this chapter.

(2) The manufacturer or importer, and any person to whom the substance is distributed for purposes of export or processing solely for export (as defined in § 721.3 of this chapter), may not use the substance except in small quantities solely for research and development in accordance with § 720.36.

(t) "Manufacturer" means a person who imports, produces, or manufactures a chemical substance. A person who extracts a component chemical substance from a previously existing chemical substance or a complex combination of substances is a manufacturer of that component chemical substance. A person who contracts with a manufacturer to manufacture or produce a chemical substance is also a manufacturer if (1) the manufacturer manufactures or produces the substance exclusively for that person, and (2) that person specifies the identity of the substance and controls the total amount produced and the basic technology for the plant process.

(u) "Mixture" means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except "mixture" does include (1) any combination which occurs, in whole or in part, as a result of a chemical reaction if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined, and if all of the chemical substances comprising the combination are not new chemical substances, and (2) hydrates of a chemical substance or hydrated ions formed by association of a chemical substance with water, so long as the nonhydrated form is itself not a new chemical substance.

(v) "New chemical substance" means any chemical substance which is not included on the Inventory.

(w) "Nonisolated intermediate" means any intermediate that is not intentionally removed from the equipment in which it is manufactured, including the reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel, and any equipment through which the chemical substance passes during a continuous flow process, but not including tanks or other vessels in which the substance is stored after its manufacture.

(x) "Person" means any natural person, firm, company, corporation, joint-venture, partnership, sole proprietorship, association, or any other business entity, any State or political subdivision thereof, any municipality, any interstate body, and any department, agency or instrumentality of the Federal Government.

(y) "Possession or control" means in possession or control of the submitter, or of any subsidiary, partnership in which the submitter is a general partner, parent company, or any company or partnership which the parent company owns or controls, if the subsidiary, parent company, or other company or partnership is associated with the submitter in the research, development, test marketing, or commercial marketing of the chemical substance in question. (A parent company owns or controls another company if the parent owns or controls 50 percent or more of the other company's voting stock. A parent company owns or controls any partnership in which it is a general partner). Information is included within this definition if it is:

(1) In files maintained by submitter's employees who are:

(i) Associated with research, development, test marketing, or commercial marketing of the chemical substance in question.

(ii) Reasonably likely to have such data.

(2) Maintained in the files of other agents of the submitter who are associated with research, development, test marketing, or commercial marketing of the chemical substance in question in the course of their employment as such agents.

(z) "Principal importer" means the first importer who, knowing that a new chemical substance will be imported rather than manufactured domestically, specifies the identity of the chemical substance and the total amount to be imported. Only perso who are incorporated, licensed, doing business in the United Stat may be principal importers.

(aa) "Process" means the prepar tion of a chemical substance or mi ture, after its manufacture, for distr bution in commerce (1) in the sam form or physical state as, or in a di ferent form or physical state fron that in which it was received by th person so preparing such substance mixture, or (2) as part of a mixture article containing the chemical su stance or mixture.

(bb) "Processor" means any perso who processes a chemical substance mixture.

(cc) "Small quantities solely for r search and development" (or "sma quantities solely for purposes of scie tific experimentation or analysis chemical research on, or analysis o such substance or another substanc including such research or analysis fo the development of a product") mear quantities of a chemical substanc manufactured, imported, or processe or proposed to be manufactured, in ported, or processed solely for r search and development that are no greater than reasonably necessary fo such purposes.

(dd) "State" means any State of th United States and the District of C lumbia, the Commonwealth of Puert Rico, the Virgin Islands, Guam, th Canal Zone, American Samoa, th Northern Mariana Islands, and an other territory or possession of th United States.

(ee) "Technically qualified indivi ual" means a person or persons (who, because of education, training, o experience, or a combination of thes factors, is capable of understandin the health and environmental risks a sociated with the chemical substanc which is used under his or her superv sion, (2) who is responsible for enfor ing appropriate methods of conductin scientific experimentation, analysis, o chemical research to minimize suc risks, and (3) who is responsible fo the safety assessments and clearanc related to the procurement, storag use, and disposal of the chemical su stance as may be appropriate or r quired within the scope of conducting a research and development activity.

(ff) "Test data" means data from a formal or informal test or experiment, including information concerning the objectives, experimental methods and materials, protocols, results, data analyses, recorded observations, monitoring data, measurements, and conclusions from a test or experiment.

(gg) "Test marketing" means the distribution in commerce of no more than a predetermined amount of a chemical substance, mixture, or article containing that chemical substance or mixture, by a manufacturer or processor, to no more than a defined number of potential customers to explore market capability in a competitive situation during a predetermined testing period prior to the broader distribution of that chemical substance, mixture, or article in commerce.

(hh) "United States," when used in the geographic sense, means all of the States.

[48 FR 21742, May 13, 1983, as amended at 51 FR 15101, Apr. 22, 1986]

Subpart B—Applicability

§ 720.22 Persons who must report.

(a)(1) Any person who intends to manufacture a new chemical substance in the United States for commercial purposes must submit a notice unless the substance is excluded under § 720.30.

(2) If a person contracts with a manufacturer to manufacture or produce a new chemical substance, and (i) the manufacturer manufactures or produces the substance exclusively for that person, and (ii) that person specifies the identity of the substance, and controls the total amount produced and the basic technology for the plant process, that person must submit the notice. If it is unclear who must report, EPA should be contacted to determine who must submit the notice.

(3) Only manufacturers that are incorporated, licensed, or doing business in the United States may submit a notice.

(b)(1) Any person who intends to import a new chemical substance into the United States for commercial purposes must submit a notice, unless the substance is excluded under § 720.30 or unless the substance is imported as part of an article.

(2) When several persons are involved in an import transaction, the notice must be submitted by the principal importer. If no one person fits the principal importer definition in a particular transaction, the importer should contact EPA to determine who must submit the notice for that transaction.

§ 720.25 Determining whether a chemical substance is on the Inventory.

(a) A new chemical substance is a chemical that is not on the Inventory.

(b)(1) A chemical substance is listed on the Inventory by specific chemical name if its identity is not confidential. If its identity is confidential, it is listed by specific name in the confidential portion of the Inventory. The confidential chemical substance is also listed on the public Inventory by a generic name which masks the specific identity. A person who intends to manufacture or import a chemical substance not listed on the Inventory by specific chemical name may ask EPA whether the substance is included on the confidential Inventory. EPA will answer such an inquiry only if EPA determines that the person has a *bona fide* intent to manufacture or import the chemical substance for commercial purposes.

(2) To establish a *bona fide* intent to manufacture or import a chemical substance, the person who proposes to manufacture or import the substance must submit to EPA:

(i) The specific chemical identity of the substance that the person intends to manufacture or import.

(ii) A signed statement that the person intends to manufacture or import that chemical substance for commercial purposes.

(iii) A description of the research and development activities conducted to date, and the purpose for which the person will manufacture or import the chemical substance.

(iv) An elemental analysis.

(v) Either an X-ray diffraction pattern (for inorganic substances), a mass spectrum (for most other substances), or an infrared spectrum of the particular chemical substance, or if such data do not resolve uncertainties with respect to the identity of the chemical substance, additional or alternative spectra or other data to identify the substance.

(3) If an importer cannot provide all the information required by paragraph (b)(2) of this section because it is claimed confidential business information by its foreign manufacturer or supplier, the foreign manufacturer or supplier may supply the information directly to EPA.

(4) EPA will review the information submitted by the proposed manufacturer or importer under this paragraph to determine whether it has a *bona fide* intent to manufacture or import the chemical substance. If necessary, EPA will compare this information either to the information requested for the confidential chemical substance under § 710.7(e)(2)(v) of this chapter or the information requested under § 720.85(b)(3)(iii).

(5) If the proposed manufacturer or importer has shown a *bona fide* intent to manufacture or import the substance, and provide sufficient unambiguous chemical identity information so EPA can make a conclusive determination of the chemical substance's Inventory status, EPA will search the confidential Inventory and inform the proposed manufacturer or importer whether the chemical substance is on the confidential Inventory.

(6) If the chemical substance is found on the confidential Inventory, EPA will notify the person(s) who originally reported the chemical substance that another person has demonstrated a *bona fide* intent to manufacture or import the substance and therefore was told that the chemical substance is on the Inventory.

(7) A disclosure of a confidential chemical identity to a person with a *bona fide* intent to manufacture or import the particular chemical substance will not be considered a public disclosure of confidential business information under section 14 of the Act.

(8) EPA will answer an inquiry on whether a particular chemical substance is on the confidential Inventory within 30 days after receipt of a complete submission under paragraph (b)(2) of this section.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.30 Chemicals not subject to notification requirements.

The following substances are not subject to the notification requirements of this part:

(a) Any substance which is not a "chemical substance" as defined in § 720.3(e).

(b) Any mixture as defined in § 720.3(u).[1]

(c) Any new chemical substance which will be manufactured or imported in small quantities solely for research and development under § 720.36.

(d) Any new chemical substance which will be manufactured or imported solely for test-marketing purposes under an exemption granted under § 720.38.

(e) Any new chemical substance manufactured solely for export if, when the substance is distributed in commerce:

(1) The substance is labeled in accordance with section 12(a)(1)(B) of the Act.

(2) The manufacturer knows that the person to whom the substance is being distributed intends to export it or process it solely for export as defined in § 721.3 of this chapter.

(f) Any new chemical substance which is manufactured or imported under the terms of a rule promulgated under section 5(h)(4) of the Act.

(g) Any byproduct if its only commercial purpose is for use by public or private organizations that (1) burn it as a fuel, (2) dispose of it as a waste, including in a landfill or for enriching soil, or (3) extract component chemical substances from it for commercial purposes. (This exclusion only applies to the byproduct; it does not apply to e component substances extracted om the byproduct.)

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[1] A new chemical substance that is manufactured or imported as part of a mixture is subject to the requirements of this part. This exclusion applies only to a mixture as a whole and not to any chemical substances which are part of the mixture.

(h) The chemical substances de- ribed below: (Although they are anufactured for commercial pur- oses under the Act, they are not man- factured for distribution in com- erce as chemical substances per se nd have no commercial purpose sepa- ate from the substance, mixture, or rticle of which they are a part.)

(1) Any impurity.

(2) Any byproduct which is not used r commercial purposes.

(3) Any chemical substance which esults from a chemical reaction that ccurs incidental to exposure of an- ther chemical substance, mixture, or rticle to environmental factors such s air, moisture, microbial organisms, r sunlight.

(4) Any chemical substance which esults from a chemical reaction that ccurs incidental to storage or disposal f another chemical substance, mix- ure, or article.

(5) Any chemical substance which esults from a chemical reaction that ccurs upon end use of another chemi- al substance, mixture, or article such s an adhesive, paint, miscellaneous leanser or other housekeeping prod- uct, fuel additive, water softening and reatment agent, photographic film, attery, match, or safety flare, and which is not itself manufactured or mported for distribution in commerce or for use as an intermediate.

(6) Any chemical substance which results from a chemical reaction that occurs upon use of curable plastic or rubber molding compounds, inks, drying oils, metal finishing compounds, adhesives, or paints, or any other chemical substance formed during the manufacture of an article destined for the marketplace without further chemical change of the chemical substance except for those chemical changes that occur as described elsewhere in this paragraph.

(7) Any chemical substance which results from a chemical reaction that occurs when (i) a stabilizer, colorant, odorant, antioxidant, filler, solvent, carrier, surfactant, plasticizer, corrosion inhibitor, antifoamer or defoamer, dispersant, precipitation inhibitor, binder, emulsifier, deemulsifier, dewatering agent, agglomerating agent, adhesion promoter, flow modifier, pH neutralizer, sequesterant, coagulant, flocculant, fire retardant, lubricant, chelating agent, or quality control reagent functions as intented, or (ii) a chemical substance, which is intended solely to impart a specific physiochemical characteristic, functions as intended.

(8) Any nonisolated intermediate.

(i) Any chemical substance which is manufactured solely for non-commercial research and development purposes. Non-commercial research and development purposes include scientific experimentation, research, or analysis conducted by academic, government, or independent not-for-profit research organizations (e.g., universities, colleges, teaching hospitals, and research institutes), unless the activity is for eventual commercial purposes.

[48 FR 21742, May 13, 1983, as amended at 51 FR 15101, Apr. 22, 1986]

§ 720.36 Exemption for research and development.

(a) This part does not apply to a chemical substance if the following conditions are met:

(1) The chemical substance is manufactured or imported only in small quantities solely for research and development.

(2) The manufacturer or importer notifies all persons in its employ or to whom it directly distributes the chemical substance, who are engaged in experimentation, research, or analysis on the chemical substance, including the manufacture, processing, use, transport, storage, and disposal of the substance associated with research and development activities, of any risk to health, identified under paragraph (b) of this section, which may be associated with the substance. The notification must be made in accordance with paragraph (c) of this section.

(3) The chemical substance is used by, or directly under the supervision of, a technically qualified individual.

(b)(1) To determine whether notification under paragraph (a)(2) of this section is required, the manufacturer or importer must review and evaluate the following information to determine whether there is reason to believe there is any potential risk to health which may be associated with the chemical substance:

(i) Information in its possession or control concerning any significant adverse reaction by persons exposed to the chemical substance which may reasonably be associated with such exposure.

(ii) Information provided to the manufacturer or importer by a supplier or any other person concerning a health risk believed to be associated with the substance.

(iii) Health and environmental effects data in its possession or control concerning the substance.

(iv) Information on health effects which accompanies any EPA rule or order issued under sections 4, 5, or 6 of the Act that applies to the substance and of which the manufacturer or importer has knowledge.

(2) When the research and development activity is conducted solely in a laboratory and exposure to the chemical substance is controlled through the implementation of prudent laboratory practices for handling chemical substances of unknown toxicity, and any distribution, except for purposes of disposal, is to other such laboratories for further research and development activity, the information specified in paragraph (b)(1) of this section need not be reviewed and evaluated. (For purposes of this paragraph, a laboratory is a contained research facility where relatively small quantities of chemical substances are used on a non-production basis, and where activities involve the use of containers for reactions, transfers, and other handling of substances designed to be easily manipulated by a single individual.)

(c)(1) The manufacturer or importer must notify the persons identified in paragraph (a)(2) of this section by means of a container labeling system, conspicuous placement of notices in areas where exposure may occur, written notification to each person potentially exposed, or any other method of notification which adequately informs persons of health risks which the manufacturer or importer has reason to believe may be associated with the substance, as determined under p
graph (b)(1) of this section.

(2) If the manufacturer or impo
distributes a chemical substance m
ufactured or imported under this
tion to persons not in its employ,
manufacturer or importer must
written form:

(i) Notify those persons that
substance is to be used only for
search and development purposes.

(ii) Provide the notice of health r
specified in paragraph (c)(1) of
section.

(3) The adequacy of any notifica
under this section is the responsib
of the manufacturer or importer.

(d) A chemical substance is
exempt from reporting under this
if any amount of the substance,
cluding as part of a mixture, is p
essed, distributed in commerce,
used, for any commercial pur
other than research and developm
except where the chemical subst
is processed, distributed in comme
or used only as an impurity or as
of an article.

(e) Quantities of the chemical
stance, or of mixtures or articles
taining the chemical substance,
maining after completion of rese
and development activities may be:

(1) Disposed of as a waste in acc
ance with applicable Federal, s
and local regulations, or

(2) Used for the following com
cial purposes:

(i) Burning it as a fuel.

(ii) Reacting or otherwise proces
it to form other chemical substa
for commercial purposes, includin
tracting component chemical
stances.

(f) Quantities of research and de
opment substances existing solel
impurities in a product or incorp
ed into an article, in accordance
paragraph (d) of this section,
quantities of research and deve
ment substances used solely for
mercial purposes listed in parag
(e) of this section, are not subjec
the requirements of paragraphs
(b), and (c) of this section, once
search and development activ
have been completed.

(g) A person who manufacture
imports a chemical substance in s

quantities solely for research and development is not required to comply with the requirements of this section if the person's exclusive intention is to perform research and development activities solely for the purpose of determining whether the substance can be used as a pesticide.

[51 FR 15102, Apr. 22, 1986]

§ 720.38 Exemptions for test marketing.

(a) Any person may apply for an exemption to manufacture or import a new chemical substance for test marketing. EPA may grant the exemption if the person demonstrates that the chemical substance will not present an unreasonable risk to injury to health or the environment as a result of the test marketing.

(b) Persons applying for a test-marketing exemption should provide the following information:

(1) All existing data regarding health and environmental effects of the chemical substance, including physical/chemical properties or, in the absence of such data, a discussion of toxicity based on structure-activity relationships (SAR) and relevant data on chemical analogues.

(2) The maximum quantity of the chemical substance which the applicant will manufacture or import for test marketing.

(3) The maximum number of persons who may be provided the chemical substance during test marketing.

(4) The maximum number of persons who may be exposed to the chemical substance as a result of test marketing, including information regarding duration and route of such exposures.

(5) A description of the test-marketing activity, including its length and how it can be distinguished from full-scale commercial production and research and development.

(c) In accordance with section 5(h)(6) of the Act, after EPA receives an application for exemption under this section, the Agency will file with the Office of the Federal Register a notice containing a summary of the information provided in the application, to the extent it has not been claimed confidential.

(d) No later than 45 days after EPA receives an application, the Agency will either approve or deny the application. Thereafter, EPA will publish a notice in the FEDERAL REGISTER explaining the reasons for approval or denial.

(e) In approving an application for exemption, EPA may impose any restrictions necessary to ensure that the substance will not present an unreasonable risk of injury to health and the environment as a result of test marketing.

(Approved by the Office of Management and Budget under control number 2070-0012)

Subpart C—Notice Form

§ 720.40 General.

(a) *Use of the notice form.* Each person who is required by Subpart B to submit a notice must complete, sign, and submit a notice containing the information in the form and manner set forth in EPA Form No. 7710-25 [2] under Appendix A of this part. Except as otherwise provided in Subpart C, each notice must be submitted with all referenced attachments. The information on the form and all attachments (unless the attachment appears in the open scientific literature) must be in English. All information submitted must be true and correct.

(b) *When to submit a notice.* Each person who is required to submit a notice must submit the notice at least 90 calendar days before manufacture or import of the new chemical substance for commercial purposes begins.

(c) *Where to submit a notice.* Each person who submits a notice must submit it to the address listed on the notice form.

(d) *General notice requirements.* Each person who submits a notice must provide the information described in § 720.45 and specified on the notice form, to the extent such information is known to or reasonably ascertainable by the submitter. In accordance with § 720.50, the notice must also include any test data in the submitter's possession or control and descriptions of other data which are known to or reasonably ascertainable by the submitter and which concern the health and environmental effects of the new chemical substance.

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[2] Copies may be obtained from: Industry Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(e) *Agency or joint submissions.* (1) A manufacturer or importer may designate an agent to submit the notice. Both the manufacturer or importer and the agent must sign the certification on the form.

(2) A manufacturer or importer may authorize another person, (e.g., a foreign manufacturer or supplier, or a toll manufacturer) to report some of the information required in the notice to EPA on its behalf. If separate portions of a joint notice are not submitted together, the submitter should indicate which information will be supplied by another person and identify that person. The other person must submit the information on the appropriate part of the notice form. The manufacturer or importer and any other person supplying the information must sign the certification provided on their respective notice forms.

(3) If EPA receives a submission which does not include information required by this rule, which the submitter indicates that it has authorized another person to provide, the notice review period will not begin until EPA receives that information.

(f) *New information.* During the notice review period, if the submitter possesses, controls, or knows of new information that materially adds to, changes, or otherwise makes significantly more complete the information included in the notice, the submitter must that information to the address listed on the notice form within ten days of receiving the new information, but no later than five days before the end of the notice review period. The new submission must clearly identify the submitter and the notice to which the new information is related. If the new information becomes available during the last five days of the notice review period, the submitter must immediately inform its EPA contract for that notice by telephone.

(g) *Chemical substances subject to*
section 4 test rule. (1) Except as pr
vided in paragraph (g)(3) of this se
tion, if (i) A person intends to man
facture or import a new chemical su
stance which is subject to the notific
tion requirements of this part, and (i
The chemical substance is subject to
test rule promulgated under section
of the Act before the notice is submi
ted, section 5(b)(1) of the Act requir
the person to submit the test data re
quired by the testing rule with th
notice. The person must submit th
data in the form and manner specifie
in the test rule and in accordance wit
§ 720.50. If the person does not subm
the test data, the submission is incom
plete and EPA will follow the proc
dures in § 720.65.

(2) If EPA has granted the submitte
an exemption under section 4(c) of th
Act from the requirement to condu
tests and submit data, the submitte
may not submit a notice until EPA re
ceives the test data.

(3) If EPA has granted the submitte
an exemption under section 4(c) of th
Act and if another person previous
has submitted the test data to EPA
the exempted person may eithe
submit the test data or provide the fo
lowing information as part of th
notice:

(i) The name, title, and address
the person who submitted the te
data to EPA.

(ii) The date the test data were su
mitted to EPA.

(iii) A citation for the test rule.

(iv) A description of the exempti
and a reference identifying it.

(h) *Chemical substances subject to*
section 5(b)(4) rule. (1) If a person
intends to manufacture or import
new chemical substance which is su
ject to the notification requiremen
of this part and which is subject to
rule issued under section 5(b)(4) of th
Act; and (ii) is not required by a ru
issued under section 4 of the Act
submit test data for the substan
before the submission of a notice, th
person must submit to EPA data
scribed in paragraph (h)(2) of this se
tion at the time the notice is subm
ted.

(2) Data submitted under paragra
(h)(1) of this section must be da

which the person submitting the notice believes show that the manufacture, processing, distribution in commerce, use and disposal of the substance, or any combination of such activities, will not present an unreasonable risk of injury to health or the environment.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.45 Information that must be included in the notice form.

Each person who submits a notice must include the information specified in the notice form to the extent it is known to or reasonably ascertainable by the submitter. However, no person is required to include information which relates solely to exposure of human or ecological populations outside of the United States. The notice form requires the following information relating to the manufacture, processing, distribution in commerce, use, and disposal of the new chemical substance:

(a)(1) For substances whose composition can be represented by a definite structural diagram (Class 1 substances), the notice must provide the chemical name (preferably Chemical Abstracts Service (CAS) or International Union of Pure and Applied Chemistry (IUPAC) nomenclature), the molecular formula, CAS Registry Number (if available), and a structural diagram.

(2) For chemical substances that cannot be fully represented by a structural diagram (Class 2 substances), the notice must provide the chemical name, the CAS Registry Number (if available), and molecular formula. The notice must identify the immediate precursors and reactants by name and CAS Registry Number (if the number is available). The notice must include a partial or incomplete structural diagram if possible. Chemical names for such substances should be developed according to the guidelines in the TSCA Chemical Substance Inventory, Initial Inventory, Volume 1.

(3) For polymers, the notice must identify monomers and other reactants used in the manufacture of the polymer by chemical name and CAS Registry Number (if available). The notice must indicate the typical percent of each monomer and other reactant in the polymer (by weight percent of total polymer); the maximum residual of each monomer present in the polymer; and a partial or incomplete structural diagram, if possible. The notice must provide estimates of the minimum number-average molecular weight of the polymer and the amount of low weight species below 500 and below 1,000 molecular weight and describe how the estimates were obtained.

(b) The impurities anticipated to be present in the substance by name, CAS Registry number, and weight percent of the total substance.

(c) Known synonyms or trade names of the new chemical substance.

(d) A description of the byproducts resulting from the manufacture, processing, use, and disposal of the new chemical substance.

(e) The estimated maximum amount to be manufactured or imported during the first year of production and the estimated maximum amount to be manufactured or imported during any 12-month period during the first three years of production.

(f) A description of intended categories of use by function and application, the estimated percent of production volume devoted to each category of use, and the percent of the new substance in the formulation for each commercial or consumer use.

(g) For sites controlled by the submitter:

(1) The identity of sites where the new substance will be manufactured, processed, or used.

(2) A process description of each manufacture, processing, and use operation which includes a diagram of the major unit operations and chemical conversions, the identity and entry point of all feedstocks, and the points of release of the new chemical substance.

(3) Worker exposure information, including worker activities, physical form of the new substance to which workers may be exposed, the number of workers, and the duration of activities.

(4) Information on release of the new substance to the environment, including the quantity and media of release and type of control technology used.

(h) For sites not controlled by the submitter, a description of each type of processing and use operation involving the new chemical substance, including identification of the estimated number of processing or use sites, situations in which worker exposure to and/or environmental release of the new chemical substance will occur, the number of workers exposed and the duration of exposure, and controls which limit worker exposure and environmental release.

§ 720.50 Submission of test data and other data concerning the health and environmental effects of a substance.

(a) *Test data on the new chemical substance in the possession or control of the submitter.* (1) Except as provided in paragraph (d) of this section, each notice must contain all test data in the submitter's possession or control which are related to the effects on health or the environment of any manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance or any mixture or article containing the new chemical substance, or any combination of such activities. This includes test data concerning the new chemical substance in a pure, technical grade, or formulated form.

(2) A full report or standard literature citation must be submitted for the following types of test data:

(i) Health effects data.

(ii) Ecological effects data.

(iii) Physical and chemical properties data.

(iv) Environmental fate characteristics.

(v) Monitoring data and other test data related to human exposure to or environmental release of the chemical substance.

(3)(i) If the data do not appear in the open scientific literature, the submitter must provide a full report. A full report includes the experimental methods and materials, results, discussion and data analysis, conclusions, references, and the name and address
of the laboratory that develope
data.

(ii) If the data appear in the
scientific literature, the sub
need only provide a standard
ture citation. A standard literatu
tation includes author, title, peri
name, date of publication, volum
page numbers.

(4)(i) If a study, report, or test
complete when a person subm
notice, the submitter must id
the nature and purpose of the
name and address of the labor
developing the data; progress to
types of data collected; significan
liminary results; and anticipated
pletion date.

(ii) If a test or experiment is
pleted before the notice review
ends, the person must submi
study, report, or test to the a
listed on the notice form, as spe
in paragraph (a)(3)(i) of this se
within ten days of receiving it, b
later than five days before the
the review period. If the test or e
ment is completed during the las
days of the review period, the su
ter must immediately inform its
contact for that notice by telepho

(5) For test data in the submi
possession or control which ar
listed in paragraph (a)(2) of thi
tion, a person is not required to s
a complete report. The person
submit a summary of the data. I
so requests, the person must sub
full report within ten days of t
quest, but no later than five
before the end of the review peri

(6) All test data described by
graph (a) are subject to these re
ments, regardless of their age, qu
or results.

(b) *Other data concerning the*
and environmental effects of th
chemical substance that are kno
or reasonably ascertainable by th
mitter. (1) Except as provided in
graph (d) of this section, any p
who submits a notice must de
the following data, including any
from a health and safety study,
data are related to the effec
health or the environment o
manufacture, processing, distrib
in commerce, use, or disposal o
new chemical substance, of any

ture or article containing the new chemical substance, or of any combination of such activities:

(i) Any data, other than test data, in the submitter's possession or control.

(ii) Any data, including test data, which are not in the submitter's possession or control, but which are known to or reasonably ascertainable by the submitter. For the purposes of this section, data are known to or reasonably ascertainable by the submitter if the data are known to any of its employees or other agents who are associated with the research and development, test marketing, or commercial marketing of the substance.

(2) Data that must be described include data concerning the new chemical substance in a pure, technical grade, or formulated form.

(3) The description of data reported under this paragraph must include:

(i) If the data appear in the open scientific literature, a standard literature citation, which includes the author, title, periodical name, date of publication, volume, and pages.

(ii) If the data are not contained in the open scientific literature, a description of the type of data and summary of the results, if available, and the names and addresses of persons the submitter believes may have possession or control of the data.

(4) All data described by this paragraph are subject to these requirements, regardless of their age, quality, or results; and regardless of whether they are complete at the time the notice is submitted.

(c) [Reserved]

(d) *Data that need not be submitted*—(1) *Data previously submitted to EPA.* (i) A person need not submit any data previously submitted to EPA with no claims of confidentiality if the notice includes the office or person to whom the data were submitted, the date of submission, and, if appropriate, a standard literature citation as specified in paragraph (a)(3)(ii) of this section.

(ii) For data previously submitted to EPA with a claim of confidentiality, the person must resubmit the data with the notice and any claim of confidentiality, under § 720.80.

(2) *Efficacy data.* This part does not require submission of any data related solely to product efficacy. This does not exempt a person from submitting any of the data specified in paragraph (a), (b), or (c) of this section.

(3) *Non-U.S. exposure data.* This part does not require submission of any data which relates only to exposure of humans or the environment outside the United States. This does not exclude nonexposure data such as data on health effects (including epidemiological studies), ecological effects, physical and chemical properties, or environmental fate characteristics.

[48 FR 21742, May 13, 1983, as amended at 51 FR 15102, Apr. 22, 1986]

§ 720.57 Imports.

(a) Except as otherwise provided in this section, the provisions of this Subpart C apply to each person who submits a notice for a new chemcial substance which he or she intends to import for a commercial purpose. In addition, each importer must comply with this section.

(b) EPA will hold the principal importer, or the importer that EPA determines must submit the notice when there is no principal importer under § 720.22(b)(2), liable for complying with this part, for completing the notice form and for the completeness and truthfulness of all information which it submits.

Subpart D—Disposition of Notices

§ 720.60 General.

This subpart establishes procedures that EPA will follow in reviewing notices.

§ 720.62 Notice that notification is not required.

When EPA receives a notice, EPA will review it to determine whether the chemical substance is subject to the requirements of this part. If EPA determines that the chemical substance is not subject to these requirements, EPA will notify the submitter that section 5 of the Act does not prevent the manufacture or import of the substance and that the submission is not a notice under this part.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.65 Acknowledgment of receipt of a notice; errors in the notice; incomplete submissions; false and misleading statements.

(a) *Notification to submitter.* EPA will acknowledge receipt of each notice by sending the submitter a letter that identifies the premanufacture notice number assigned to the new chemical substance and the date on which the review period begins. The review period will begin on the date the notice is received by the Office of Toxic Substances Document Control Officer. The acknowledgment does not constitute a finding by EPA that the notice, as submitted, is in compliance with this part.

(b) *Errors in the notice.* (1) Within 30 days of receipt of the notice, EPA may request that the submitter remedy errors in the notice. The following are examples of such errors:

(i) Failure to date the notice form.

(ii) Typographical errors that cause data to be misleading or answers to any questions to be unclear.

(iii) Contradictory information.

(iv) Ambiguous statements or information.

(2) In the request to correct the notice, EPA will explain the action which the submitter must take to correct the notice.

(3) If the submitter fails to correct the notice within 15 days of receipt of the request, EPA may extend the notice period under section (5)(c) of the Act, in accordance with § 720.75(c).

(c) *Incomplete submissions.* (1) A submission is not complete, and the notification period does not begin, if:

(i) The wrong person submits the notice form.

(ii) The submitter does not sign the notice form.

(iii) Some or all of the information in the notice or the attachments are not in English, except for published scientific literature.

(iv) The submitter does not use the notice form.

(v) The submitter does not provide information that is required by section 5(d)(1)(B) and (C) of the Act and § 720.50.

(vi) The submitter does not provide information required on the notice form and by § 720.45 or indicate that it is not known to or reasonably ascertainable by the submitter.

(vii) The submitter does not submit a second copy of the submission with all confidential information deleted for the public file, as required by § 720.80(b)(2).

(viii) The submitter does not include any information required by section 5(b)(1) of the Act and pursuant to a rule promulgated under section 4 of the Act, as required by § 720.40(g).

(ix) The submitter does not submit data which the submitter believes show that the chemical substance will not present an unreasonable risk of injury to health or the environment, if EPA has listed the chemical substance under section 5(b)(4) of the Act, as required in § 720.40(h).

(2)(i) If EPA receives an incomplete submission, the Director, or his or her delegate, will notify the submitter within 30 days of receipt that the submission is incomplete and that the notice review period will not begin until EPA receives a complete notice.

(ii) If EPA obtains additional information during the notice review period that indicates the original submission was incomplete, the Director, or his or her delegate, may declare the submission incomplete within 30 days after EPA obtains the additional information and so notify the submitter.

(3) The notification that a submission is incomplete under paragraph (c)(2) (i) or (ii) of this section will include:

(i) A statement of the basis of EPA's determination that the submission is incomplete.

(ii) The requirements for correcting the incomplete submission.

(iii) Information on procedures under paragraph (c)(4) of this section for filing objections to the determination or requesting modification of the requirements for completing the submission.

(4) Within ten days after receipt of notification by EPA that a submission

incomplete, the submitter may file ritten objections requesting that PA accept the submission as a com- lete notice or modify the require- ents necessary to complete the sub- ission.

(5)(i) EPA will consider the objec- ions filed by the submitter. The Di- ector, or his or her delegate, will de- ermine whether the submission was omplete or incomplete, or whether to odify the requirements for complet- ng the submission. EPA will notify he submitter in writing of EPA's re- ponse within ten days of receiving the bjections.

(ii) If the Director, or his or her del- gate, determines, in response to the bjection, that the submission was omplete, the notice review period will e deemed suspended on the date EPA eclared the notice incomplete, and vill resume on the date that the otice is declared complete. The sub- nitter need not correct the notice as PA originally requested. If EPA can omplete its review within 90 days rom the date of the original submis- ion, the Director, or his or her dele- ate, may inform the submitter that he running of the review period will esume on the date EPA originally de- lared it incomplete.

(iii) If the Director, or his or her del- egate, modifies the requirements for ompleting the submission or concurs vith EPA's original determination, the otice review period will begin when EPA receives a complete notice.

(d) *Materially false or misleading tatements.* If EPA discovers at any ime that person submitted materially alse or misleading statements in the otice, EPA may find that the notice vas incomplete from the date it was ubmitted, and take any other appro- riate action.

§ 720.70 Notice in the Federal Register.

(a) *Filing of* FEDERAL REGISTER *otice.* In accordance with section 5(d)(2) of the Act, after EPA receives a otice, EPA will file with the Office of he Federal Register a notice including the information specified in paragraph (b) of this section.

(b) *Contents of notice.* (1) In the ublic interest, the specific chemical dentity listed in the notice will be published in the FEDERAL REGISTER unless the submitter has claimed chemical identity confidential. If the submitter claims confidentiality, a generic name will be published in accordance with § 720.85(a)(3).

(2) The categories of use of the new chemical substance will be published as reported in the notice unless this information is claimed confidential. If confidentiality is claimed, the generic information which is submitted under § 720.87(b) will be published.

(3) A list of data submitted in accordance with § 720.50(a) will be published. In addition, for test data submitted in accordance with § 720.40(g), a summary of the data will be published.

(4) The submitter's identity will be published, unless the submitter has claimed it confidential.

§ 720.75 Notice review period.

(a) *Length of notice review period.* The notice review period specified in section 5(a) of the Act runs for 90 days from the date the Document Control Officer for the Office of Toxic Substances receives a complete notice, or the date EPA determines the notice is complete under § 720.65(c), unless the Agency extends the period under section 5(c) of TSCA and paragraph (c) of this section.

(b) *Suspension of the running of the notice review period.* (1) A submitter may voluntarily suspend the running of the notice review period if the Director or his or her delegate agrees. If the Director does not agree, the review period will continue to run, and EPA will notify the submitter. A submitter may request a suspension at any time during the notice review period. The suspension must be for a specified period of time.

(2) A request for suspension may be made in writing to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The suspension also may be made orally, including by telephone, to the submitter's EPA contact for that notice. EPA will send the submitter a written con-

firmation that the suspension has been granted.

(i) An oral request may be granted for 15 days only. To obtain a longer suspension, the Document Control Officer for the Office of Toxic Substances must receive written confirmation of the oral request. The notice review period is suspended as of the date of the oral request.

(ii) If the submitter has not made a previous oral request, the running of the notice review period is suspended as of the date of receipt of the written request by the Document Control Officer for the Office of Toxic Substances.

(c) *Extension of notice review period.* (1) At any time during the notice review period, EPA may determine that good cause exists to extend the notice review period specified in paragraph (a) of this section.

(2) If EPA makes such a determination, EPA will:

(i) Notify the submitter that EPA is extending the notice review period for a specified length of time, and state the reasons for the extension.

(ii) Issue a notice for publication in the FEDERAL REGISTER which states that EPA is extending the notice review period and gives the reasons for the extension.

(3) The initial extension may be for a period of up to 90 days. If the initial extension is for less than 90 days, EPA may make additional extensions. However, the total period of extensions may not exceed 90 days for any notice.

(4) The following are examples of situations in which EPA may find that good cause exists for extending the notice review period:

(i) EPA has reviewed the notice and determined that there is a significant possibility that the chemical substance will be regulated under section 5(e) or section 5(f) of the Act, but EPA is unable to initiate regulatory action within the initial 90-day period.

(ii) EPA has reviewed the submission and is seeking additional information.

(iii) EPA has received significant additional information during the notice review period.

(iv) The submitter has failed to correct a notice after receiving EPA's request under § 720.65(b).

(d) *Notice of expiration of no*
review period. EPA will notify the
mitter that the notice review pe
has expired or that EPA has comp
ed its review of the notice. Expira
of the review period does not co
tute EPA approval or certificatio
the new chemical substance, and
not mean that EPA may not take
ulatory action against the substanc
the future. After expiration of
statutory notice review period, in
absence of regulatory action by
under section 5(e), 5(f), or 6(a) of
Act, the submitter may manufac
or import the chemical substance
if the submitter has not rece
notice of expiration.

(e) *Withdrawal of a notice by*
submitter. (1) A submitter may
draw a notice during the notice re
period. A statement of withdr
must be made in writing to the T
Document Processing Center
790), Rm. L-100, Office of Toxic
stances, Environmental Protec
Agency, 401 M St., SW., Washin
DC 20460. The withdrawal is effe
upon receipt of the statement by
Document Control Officer.

(2) If a manufacturer or impo
which withdrew a notice later re
mits a notice for the same chem
substance, a new notice review pe
begins.

(Approved by the Office of Manag
and Budget under control number
0012)

[48 FR 21742, May 13, 1983, as amend
53 FR 12523, Apr. 15, 1988]

§ 720.78 Recordkeeping.

(a) Any person who submits a n
under this part must retain docu
tation of information in the notic
cluding (1) other data, as define
§ 720.50(b), in the submitter's po
sion or control; and (2) records of
duction volume for the first t
years of production or import,
date of commencement of man
ture or import, and documentatio
this information. This informa
must be retained for five years
the date of commencement of m
facture of import.

(b)(1) Persons who manufactu
import a chemical substance u

§ 720.36 must retain the following records:

(i) Copies of, or citations to, information reviewed and evaluated under § 720.36(b)(1) to determine the need to make any notification of risk.

(ii) Documentation of the nature and method of notification under § 720.36(c)(1) including copies of any labels or written notices used.

(iii) Documentation of prudent laboratory practices used instead of notification and evaluation under § 720.36(b)(2).

(iv) The names and addresses of any persons other than the manfacturer or importer to whom the substance is distributed, the identity of the substance to the extent known, the amount distributed, and copies of the notifications required under § 720.36(c)(2). These records are not required when substances are distributed as impurities or incorporated into an article, in accordance [illegible]h paragraph (d) of this section.

(2) A person who manufactures or imports a chemical substance under § 720.36 and who manufactures or imports the substance in quantities greater than 100 kilograms per year must retain records of the identity of the substance to the extent known, the production volume of the substance, and the person's disposition of the substance. The person is not required to maintain records of the disposition of products containing the substance as an impurity or of articles incorporating the substances.

(3) Records under this paragraph must be retained for 5 years after they are developed.

(c) Any person who obtains a test-marketing exemption under this part must retain documentation of information in the application and documentation of compliance with any restrictions imposed by EPA when it granted the application. This information must be retained for five years from the final date of manufacture or import under the exemption.

(Approved by the Office of Management and Budget under control number 2070-0012)

[48 FR 21742, May 13, 1983; 48 FR 33872, July 26, 1983, as amended at 51 FR 15102, Apr. 22, 1986]

Subpart E—Confidentiality and Public Access to Information

§ 720.80 General provisions.

(a) A person may assert a claim of confidentiality for any information which he or she submits to EPA under this part.

(b) Any claim of confidentiality must accompany the information when it is submitted to EPA.

(1)(i) For information submitted on the notice form, the claim(s) must be asserted on the form in the manner prescribed on the notice form.

(ii) When a person submits information in an attachment, the claim(s) must be asserted in the attachment as described on the notice form.

(2) The person must submit two copies of each notice form and any attachments if any information is claimed confidential.

(i) One copy of the form and attachments must be complete. In that copy, the submitter must mark the information which is claimed confidential in the manner prescribed on the notice form.

(ii) The second copy must be complete except that all information claimed as confidential in the first copy must be deleted. EPA will place the second copy in the public file.

(iii) If the submitter does not provide the second copy, the submission is incomplete and the notice review period does not begin to run until EPA receives the second copy, in accordance with § 720.65(c)(1)(vi).

(c) EPA will disclose information that is subject to a claim of confidentiality asserted under this section only to the extent permitted by the Act, this subpart, and Part 2 of this title.

(d) If a notice submitter does not assert a claim of confidentiality for information at the time it is submitted to EPA, EPA may make the information public and place it in the public file without further notice to the submitter.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.85 Chemical identity.

(a) *Claims applicable to the period prior to commencement of manufacture or import.* (1)(i) A person who submits information to EPA under this part may assert a claim of confidentiality for the chemical identity of the new chemical substance. This claim will apply only to the period prior to the commencement of manufacture or import for commercial purposes. A submitter may assert this claim only if the submitter believes that public disclosure prior to commencement of manufacture or import of the fact that anyone intends to manufacture or import the specific chemical substance for commercial purposes would reveal confidential business information.

(ii) If the notice includes a health and safety study concerning the new chemical substance and if the claim for confidentiality with respect to the chemical identity is denied in accordance with § 720.90(c), EPA will deny a claim asserted under this paragraph.

(2) Any person who asserts a claim of confidentiality for chemical identity under this paragraph must provide one of the following items at the time the notice is submitted:

(i) The generic name which was accepted by EPA in the prenotice consultation conducted under paragraph (a)(3) of this section.

(ii) One generic name that is only as generic as necessary to protect the confidential chemical identity of the particular chemical substance. The name should reveal the specific chemical identity to the maximum extent possible. The generic name will be subject to EPA review and approval at the time a notice of commencement is submitted.

(3)(i) Any person who intends to assert a claim of confidentiality for the chemical identity of a new chemical substance may seek a determination by EPA of an appropriate generic name for the substance before submitting a notice. For this purpose, the person should submit to EPA:

(A) The chemical identity of the substance.

(B) A proposed generic name(s) which in only as generic as necessary to protect the confidential chemical identity of the new chemical su stance. The name(s) should reveal th chemical identity of the substance t the maximum extent possible.

(ii) Within 30 days, EPA will infor the submitter either that one of th proposed generic names is adequate o that none is adequate and further con sultation is necessary.

(4) If a submitter claims chemica identity to be confidential under thi paragraph, and if the submitter com plies with paragraph (a)(2) of this se tion, EPA will issue for publication i the FEDERAL REGISTER notice describe in § 720.70 the generic name propose by the submitter or one agreed upo by EPA and the submitter.

(b) *Claims applicable to the peri after commencement of manufactu or import.* (1) Any claim of confide tiality under paragraph (a) of this se tion is applicable only until the su stance is manufactured or importe for commercial purposes and become eligible for inclusion on the Inventory To maintain the confidential status o the chemical identity when the sub stance is added to the Inventory, submitter must reassert the confide tiality claim and substantiate th claim in the notice of commencemen of manufacture required und § 720.102. A submitter may not clai the chemical indentity confidential fo the period after commencement o manufacture or import unless the sub mitter claimed the chemical identit confidential for the period prior t commencement of manufacture o import under paragraph (a) of th section.

(2)(i) A person who believes th public disclosure of the fact th anyone manfactures or imports th new chemical substance for comme cial purposes would reveal confidenti business information may assert claim of confidentiality under th paragraph.

(ii) If the notice includes a heal and safety study concerning the ne chemical substance, and if the clai for confidentiality with respect to th chemical identity is denied in accor ance with § 720.90(c), EPA will deny claim asserted under this paragraph.

(3) Any person who asserts a confidentiality claim for chemical identity must:

(i) Comply with the requirements of paragraph (a)(3) of this section regarding submission of a generic name.

(ii) Agree that EPA may disclose to a person with a *bona fide* intent to manufacture or import the chemical substance the fact that the particular chemical substance is included on the confidential Inventory for purposes of notification under section 5(a)(1)(A) of the Act.

(iii) Have available for the particular chemical substance, and agree to furnish to EPA upon request:

(A) An elemental analysis.

(B) Either an X-ray diffraction pattern (for inorganic substances), a mass spectrum (for most other substances), or an infrared spectrum of the particular chemical substance, or if such data do not resolve uncertainties with respect to the identity of the chemical substance, additional or alternative spectra or other data to identify the chemical substance.

(iv) Provide a detailed written substantiation of the claim, by answering the following questions:

(A) What harmful effects to your competitive position, if any, do you think would result if EPA publishes on the Inventory the identity of the chemical substance? How could a competitor use such information given the fact that the identity of the substance otherwise would appear on the Inventory of chemical substances with no link between the substance and your company or industry? How substantial would the harmful effects of disclosure be? What is the casual relationship between the disclosure and the harmful effects?

(B) For what period of time should confidential treatment be given? Until a specific date, the occurrence of a specific event, or permanently? Why?

(C) Has the chemical substance been patented? If so, have you granted licenses to others with respect to the patent as it applies to the chemical substance? If the chemical substance has been patented and therefore disclosed through the patent, why should it be treated as confidential for purposes of the Inventory?

(D) Has the identity of the chemical substance been kept confidential to the extent that your competitors do not know it is being manufactured on imported for a commercial purpose by anyone?

(E) Is the fact that someone is manufacturing or importing this chemical substance for commercial purposes available to the public, e.g., in technical journals or other publications; in libraries; or in State, local, or Federal agency public files?

(F) What measures have you taken to prevent undesired disclosure of the fact that you are manufacturing or importing this substance for a commercial purpose?

(G) To what extent has the fact that you are manufacturing or importing this chemical substance for a commercial purpose been disclosed to others? What precautions have you taken in regard to these disclosures? Has this information been disclosed to the public or to competitors?

(H) In what form does this particular chemical substance leave the site of manufacture, e.g., as part of a product; in an effluent or emission stream? If so, what measures have you taken to guard against discovery of its identity?

(I) If the chemical substance leaves the site of manufacture in a product that is available to either the public or your competitors, can they identify the substance by analyzing the product?

(J) For what purpose do you manufacture or import the substance?

(K) Has EPA, another Federal agency, or any Federal court made any pertinent confidentiality determinations regarding this chemical substance? If so, copies of such determinations must be included in the substantiation.

(L) If the notice includes a health and safety study concerning the new chemical substance, the submitter must also answer the questions in § 720.90(b)(2).

(4) If the submitter does not meet the requirements of this paragraph, EPA will deny the claim of confidentiality.

(5)(i) EPA will publish a generic name on the public Inventory if:

(A) The submitter asserts a claim of confidentiality in accordance with this paragraph.

(B) No claim for confidentiality of the specific chemical identity as part of a health and safety study has been denied in accordance with Part 2 of this Title or § 720.90.

(ii) Publication of a generic name on the public Inventory does not create a category for purposes of the Inventory. Any person who has a *bona fide* intent to manufacture or import a chemical substance which is described by a generic name on the public Inventory may submit an inquiry to EPA under § 720.25(b) to determine whether the particular chemical substance is included on the confidential Inventory.

(iii) Upon receipt of a request described in § 720.25(b), EPA may require the submitter which originally asserted confidentiality for a chemical substance to submit to EPA the information listed in paragraph (b)(3)(iii) of this section.

(iv) Failure to submit any of the information required under paragraph (b)(3)(iii) of this section within ten days of a request by EPA under this paragraph is a waiver of the original submitter's confidentiality claim. In this event, EPA may place the specific chemical identity on the public Inventory without further notice to the original submitter.

(6) If a submitter asserts a claim of confidentiality under this paragraph, EPA will examine the generic chemical name proposed by the submitter.

(i) If EPA determines that the generic name proposed by the submitter is only as generic as necessary to protect the confidential identity of the particular chemical substance, EPA will place that generic name on the public Inventory.

(ii) If EPA determines that the generic name proposed by the submitter is more generic than necessary to protect the confidential identity, EPA will propose in writing, for review by the submitter, an alternative generic name that will reveal the chemical identity of the chemical substance to the maximum extent possible.

(iii) If the generic name proposed by EPA is acceptable to the submitter, EPA will place that generic name on the public Inventory.

(iv) If the generic name proposed by EPA is not acceptable to the submitter, the submitter must explain in detail why disclosure of that generic name would reveal confidential business information and propose another generic name which is only as generic as necessary to protect the confidential identity. If EPA does not receive a response from the submitter within 30 days after the submitter receives the proposed name, EPA will place EPA's chosen generic name on the public Inventory. If the submitter does provide the information requested, EPA will review the response. If the submitter's proposed generic name is acceptable, EPA will publish that generic name on the public Inventory. If the submitter's proposed generic name is not acceptable, EPA will notify the submitter of EPA's choice of a generic name. Thirty days after this notification, EPA will place the chosen generic name on the public Inventory.

§ 720.87 Categories or proposed categories of uses of a new chemical substance.

(a) A person who submits information to EPA under this Part on the categories or proposed categories of use of a new chemical substance may assert a claim of confidentiality for this information.

(b) A submitter that asserts such a claim must:

(1) Report the categories or proposed categories of use of the chemical substance.

(2) Provide, in nonconfidential form, a description of the uses that is only as generic as necessary to protect the confidential business information. The generic use description will be included in the FEDERAL REGISTER notice described in § 720.70.

(c) The person must submit the information required by paragraph (b) of this section in the manner specified in the notice form.

§ 720.90 Data from health and safety studies.

(a) *Information other than specific chemical identity.* Except as provided in paragraph (b) of this section, EPA will deny any claim of confidentiality with respect to information included in a health and safety study, unless the information would disclose confidential business information concerning:

(1) Processes used in the manufacture or processing of a chemical substance or mixture.

(2) In the case of a mixture, the portion of the mixture comprised by any of the chemical substances in the mixture.

(3) Informaton which is not in any way related to the effects of a substance on human health or the environment, such as the name of the submitting company, cost or other financial data, product development or marketing plans, and advertising plans, for which the person submits a claim of confidentiality in accordance with § 720.80.

(b) *Specific chemical identity*—(1) *Claims applicable to period prior to commencement of manufacture.* A claim of confidentiality for the period prior to commencement of manufacture or import for the chemical identity of a chemical substance for which a health and safety study was submitted must be asserted in conjunction with a claim asserted under § 720.85(a).

(2) *Claims applicable to period after commencement of manufacture or import for commercial purposes.* To maintain the confidential status of the chemical identity of a chemical substance for which a health and safety study was submitted after commencement of manufacture or import, the claim must be reasserted and substantiated in conjunction with a claim under § 720.85(b). In addition to the questions set forth in § 720.85(b)(3)(iv) of this part, the submitter must answer the following questions:

(i) Would disclosure of the chemical identity disclose processes used in the manufacture or processing of a chemical substance or mixture? Describe how this would occur. In responding to the question in § 720.85(b)(3)(iv)(A), explain what harmful competitive effects would occur from disclosure of this process information.

(ii) Would disclosure of the chemical identity disclose the portion of a mixture comprised by any of the substances in the mixture? Describe how this would occur. In responding to the question in § 720.85(b)(3)(iv)(A), explain what harmful competitive effects would occur from disclosure of this information.

(iii) Do you assert that disclosure of the chemical identity is not necessary to interpret any of the health and safety studies you have submitted? If so, explain how a less specific identity would be sufficient to interpret the studies.

(c) *Denial of confidentiality claim.* EPA will deny a claim of confidentiality for chemical identity under paragraph (b) of this section, unless:

(1) The information would disclose processes used in the manufacture or processing of a chemical substance or mixture.

(2) In the case of a mixture, the information would disclose the portion of the mixture comprised by any of the substances in the mixture.

(3) The specific chemical identity is not necessary to interpret a health and safety study.

(d) *Use of generic names.* When EPA discloses a health and safety study containing a specific chemical identity, which the submitter has claimed confidential, and if the Agency has not denied the claim under paragraph (c) of this section, EPA will identify the chemical substance by the generic name selected under § 720.85.

(Approved by the Office of Management and Budget under control number 2070-0012)

§ 720.95 Public file.

All information submitted with a notice, including any health and safety study and other supporting documentation, will become part of the public file for that notice, unless such materials are claimed confidential. In addition, EPA may add materials to the public file, subject to subpart E of this part. Any of the nonconfidential material described in this subpart will be available for public inspection in the TSCA Public Docket Office, Rm. NE-G004, 401 M St., SW., Washington, DC, between the hours of 8 a.m. and 4 p.m. weekdays, excluding legal holidays.

[48 FR 21742, May 13, 1983, as amended at 53 FR 12523, Apr. 15, 1988]

Subpart F—Commencement of Manufacture or Import

§ 720.102 Notice of commencement of manufacture or import.

(a) *Applicability.* Any person who commences the manufacture or import of a new chemical substance for a nonexempt commercial purpose for which that person previously submitted a section 5(a) notice under this part must submit a notice of commencement of manufacture or import.

(b) *When to report.* (1) If manufacture or import for commercial purposes begins on or after the effective date of this rule, the submitter must submit the notice to EPA on, or no later than 30 calendar days, after the first day of such manufacture or import.

(2) If manufacture or import for commercial purposes began or will begin before the effective date of this rule, the submitter must submit the notice by the effective date of this rule.

(c) *Information to be reported.* The notice must contain the following information: Specific chemical identity, premanufacture notice number, and the date when manufacture or import commences. If the person claimed chemical identity confidential in the commencement notice, and wants the identity to be listed on the confidential Inventory, the claim must be reasserted and substantiated in accordance with § 720.85(b). Otherwise, EPA will list the specific chemical identity on the public Inventory.

(d) *Where to submit.* Notices of commencement of manufacture or import should be submitted to: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(Approved by the Office of Management and Budget under control number 2070-0012)

[48 FR 21742, May 13, 1983, as amended at 48 FR 41140, Sept. 13, 1983; 51 FR 15103, Apr. 22, 1986; 53 FR 12523, Apr. 15, 1988]

Subpart G—Compliance and Inspections

§ 720.120 Compliance.

(a) Failure to comply with any provision of this part is a violation of section 15 of the Act (15 U.S.C 2614).

(b) A person who manufactures o imports a new chemical substanc before a notice is submitted and th notice review period expires is in violation of section 15 of the Act even i that person was not requied to submi the notice under § 720.22.

(c) Using for commercial purposes chemical substance or mixture whic a person knew or had reason to kno was manufactured, processed, or di tributed in commerce in violation o section 5 of this rule is a violation o section 15 of the Act (15 U.S.C. 261

(d) Failure or refusal to establis and maintain records or to perm access to or copying of records, as r quired by the Act, is a violation of se tion 15 of the Act (15 U.S.C. 2614).

(e) Failure or refusal to permit ent or inspection as required by section is a violation of section 15 of the A (15 U.S.C. 2614).

(f) Violators may be subject to th civil and criminal penalties in secti 16 of the Act (15 U.S.C. 2615) for ea violation. Persons who submit mater ally misleading or false information connection with the requirements any provision of this rule may be su ject to penalties calculated as if th never filed their notices.

(g) EPA may seek to enjoin the ma ufacture or processing of a chemic substance in violation of this rule act to seize any chemical substan manufactured or processed in vio tion of this rule or take other actio under the authority of section 7 this Act (15 U.S.C. 2606) or section or this Act (15 U.S.C. 2616).

§ 720.122 Inspections.

EPA will conduct inspections und section 11 of the Act to assure comp ance with section 5 of the Act and t rule, to verify that information s mitted to EPA under this rule is t and correct, and to audit data subm ted to EPA under this rule.

APPENDIX A—PREMANUFACTURE NOTICE FOR NEW CHEMICAL SUBSTANCES

O.M.B. No. 2070-0012: Approval Expires 3-3-86

EPA United States Environmental Protection Agency

PREMANUFACTURE NOTICE FOR NEW CHEMICAL SUBSTANCES

When completed send this form to:	DOCUMENT CONTROL OFFICER OFFICE OF TOXIC SUBSTANCES, TS-793 U.S. E.P.A. 401 M STREET, SW WASHINGTON, D.C. 20460
Enter the total number of pages in the Premanufacture Notice ⟶	

AGENCY USE ONLY	
Date of receipt	
Document control number	EPA case number

GENERAL INSTRUCTIONS

You must provide all information requested in this form to the extent that it is known to or reasonably ascertainable by you. Make reasonable estimates if you do not have actual data.

Before you complete this form, you should read the "Instructions Manual for Premanufacture Notification" (**Instructions Manual**).

Part I. GENERAL INFORMATION

You must provide the chemical identity of the new chemical substance, even if you claim the identity as confidential. You may authorize another person to submit the identity for you, but your submission will not be complete and review will not begin until EPA receives this information.

Part II. HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

You may need additional copies of part II, sections A and B if there are several manufacture, processing, or use operations that you will describe in the notice. You should reproduce these sections as needed.

Part III. LIST OF ATTACHMENTS

You should attach additional sheets if you do not have enough space on the form to answer a question fully. In part III, list these attachments, any test data or other data, and any optional information that you include in the notice.

OPTIONAL INFORMATION

You may include in the notice any information that you want EPA to consider in evaluating the new substance. The **Instructions Manual** identifies categories of optional information that you may want EPA to review.

CONFIDENTIALITY CLAIMS

You may claim any information in this notice as confidential. To assert a claim on the form, mark (X) the confidential box next to the information that you claim as confidential. To assert a claim in an attachment, circle or bracket the information you claim as confidential. If you claim information in the notice as confidential, you must provide a sanitized version of the notice, including attachments, to EPA with your submission. For additional instructions on claiming information as confidential, read the **Instructions Manual.**

Indicate below the categories of information you have claimed as confidential in the notice.

1 ☐ SUBMITTER IDENTITY
2 ☐ CHEMICAL IDENTITY
3 ☐ PRODUCTION VOLUME
4 ☐ USE INFORMATION
5 ☐ PROCESS INFORMATION
6 ☐ PORTIONS OF A MIXTURE
7 ☐ OTHER INFORMATION

TEST DATA AND OTHER DATA

You are required to submit all test data in your possession or control and to provide a description of all other data known to or reasonably ascertainable by you if these data are related to the health and environmental effects of the manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance. Standard literature citations may be submitted for data in the open scientific literature. Complete test data, not summaries of data, must be submitted if they do not appear in the open literature. Following are examples of test data and other data. You should submit these data according to the requirements of §720.50 of the Premanufacture Notification Rule (40 CFR Part 720).

Test data

- **Environmental fate data**
  - Spectra (UV, visible, and infrared)
  - Density of liquids and solids
  - Water solubility
  - Melting point/melting range
  - Boiling point/boiling range
  - Vapor pressure
  - Partition coefficient, n-octanol/water
  - Biodegradation
  - Hydrolysis (as a function of pH)
  - Photochemical degradation
  - Adsorption/desorption to soil types
  - Dissociation constant
  - Other physical/chemical properties
- **Health effects data**
  - Mutagenicity
  - Carcinogenicity
  - Teratogenicity
  - Acute toxicity
  - Repeated dose toxicity
  - Metabolism studies
  - Sensitization
  - Irritation
- **Environmental effects data**
  - Microbial and algal toxicity
  - Terrestrial vascular plant toxicity (e.g., seed germination studies, growth inhibition)
  - Acute and chronic toxicity to animals (e.g., fish, birds, mammals, invertebrates)

Other data

- **Risk assessments**
- **Structure/activity relationships**
- **Test data not in the possession or control of the submitter**

EPA Form 7710-25 (4-26-83)

CERTIFICATION

I certify that to the best of my knowledge and belief:

1. The company named in part I, section A, subsection 1a of this notice form intends to manufacture or import for a commercial purpose, other than in small quantities solely for research and development, the substance identified in part I, section B.
2. All information provided in this notice is complete and truthful as of the date of submission.
3. I am submitting with this notice all test data in my possession or control and a description of all other data known to or reasonably ascertainable by me as required by §720.50 of the Premanufacture Notification Rule.

Signature of authorized official	Date
Signature of agent — *(if applicable)*	Date

Part I — GENERAL INFORMATION

Section A — SUBMITTER IDENTIFICATION

Mark (X) the "Confidential" box next to any subsection you claim as confidential.

1a. Person submitting notice
Name of authorized official   Title
Company
Mailing address (number and street)
City, State, ZIP code

b. Agent *(if applicable)*
Name of authorized official   Title
Company
Mailing address (number and street)
City, State, ZIP code

c. *If you are submitting this notice as part of a joint submission, mark (X) this box.* → ☐

2. Technical contact
Name   Title
Company
Mailing address (number and street)
City, State, ZIP code   Telephone   Area code   Number

3. If you have had a prenotice communication (PC) concerning this notice and EPA assigned a PC Number to the notice, enter the number →		*Mark (X) if none* → ☐
4. If you have submitted a test-marketing exemption (TME) application for the chemical substance covered by this notice, enter the TME number assigned by EPA →		*Mark (X) if none* → ☐
5. If you have submitted a bona fide request for the chemical substance covered by this notice, enter the bona fide request number assigned by EPA →		*Mark (X) if none* → ☐

6. Type of Notice — *Mark (X)*   1 ☐ Manufacture   2 ☐ Import

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Part I — GENERAL INFORMATION — Continued

Section B — CHEMICAL IDENTITY INFORMATION

Mark (X) the "Confidential" box next to any item you claim as confidential.

Complete either Item 1 or 2 as appropriate. Complete all other Items.

If another person will submit chemical identity information for you, mark (X) the box at the right. → ☐
Identify the name, company, and address of that person in a continuation sheet.

Confidential

1. **Class 1 or 2 chemical substances** (for definitions of class 1 and class 2 substances, see the **Instructions Manual**) ☐

a. Class of substance — *Mark (X)* 1 ☐ Class 1 2 ☐ Class 2

b. Chemical name (preferably CAS or IUPAC nomenclature) ☐

c. Molecular formula and CAS Registry Number (if known) ☐

d. For a class 1 substance, provide a structural diagram. For a class 2 substance — (1) List the immediate precursor substances with their respective CAS Registry Numbers. (2) Describe the nature of the reaction or process. (3) Indicate the range of composition and the typical composition (where appropriate). (4) Provide a representative structural diagram (if possible). ☐

☐ *Mark (X) this box if you attach a continuation sheet.*

Part I — GENERAL INFORMATION — Continued

Section B — CHEMICAL IDENTITY INFORMATION — Continued

2. **Polymers** (For a definition of polymer, see the **Instructions Manual**.)

a. Indicate the **lowest** number-average molecular weight composition of the polymer you intend to manufacture. Indicate the **maximum** weight percent of low molecular weight species below 500 and below 1,000 absolute molecular weight of that composition. Describe the methods of measurement or the bases for your estimates.

☐ *Mark (X) this box if you attach a continuation sheet.*

b. You must make separate confidentiality claims for monomer or other reactant identity, composition information, and residual information. Mark (X) the "Confidential" box next to any item you claim as confidential.

(1) — Provide the chemical name and CAS Registry Number of each monomer or other reactant used in the manufacture of the polymer.
(2) — Indicate the **typical** weight percent of each monomer or other reactant in the polymer.
(3) — Mark (X) the identity column if you want a monomer or other reactant used at two weight percent or less to be listed as part of the polymer description on the TSCA Chemical Substance Inventory.
(4) — Indicate the **maximum** weight percent of each monomer or other reactant that may be present as a residual in the polymer as manufactured for commercial purposes.

Monomer or other reactant and CAS Registry Number (1)	**Confidential**	Typical composition (2)	Identity Mark *(X)* (3)	**Confidential**	Maximum residual (4)
		%			%
		%			%
		%			%
		%			%
		%			%
		%			%
		%			%

☐ *Mark (X) this box if you attach a continuation sheet.*

c. Provide a representative structural diagram of the polymer, if possible.

☐ *Mark (X) this box if you attach a continuation sheet.*

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Part I — GENERAL INFORMATION — Continued

Section B — CHEMICAL IDENTITY INFORMATION — Continued

3. Impurities

(a) – Identify each impurity that may be reasonably anticipated to be present in the chemical substance as manufactured for commercial purposes. Provide the CAS Registry Number if available. If there are unidentified impurities, enter "unidentified."

(b) – Estimate the **maximum** weight percent of each impurity. If there are unidentified impurities, estimate their total weight percent.

Impurity and CAS Registry Number (a)	Maximum percent (b)	Confidential
	%	
	%	
	%	
	%	
	%	
	%	
	%	

☐ *Mark (X) this box if you attach a continuation sheet.*

4. Synonyms — Enter any synonyms for the new chemical substance identified in subsection 1 or 2. **Confidential**

☐ *Mark (X) this box if you attach a continuation sheet.*

5. Trade identification — List trade names for the new chemical substance identified in subsection 1 or 2.

☐ *Mark (X) this box if you attach a continuation sheet.*

6. Generic chemical name — If you claim chemical identity as confidential, enter the generic chemical name that you developed with EPA during prenotice communication. If you have not developed a generic name with EPA, provide a generic name that reveals the specific chemical identity of the new chemical substance to the maximum extent possible. Read the TSCA Chemical Substance Inventory, Initial Inventory, Volume I for guidance on developing generic names.

☐ *Mark (X) this box if you attach a continuation sheet.*

7. Byproducts — Describe any byproducts resulting from the manufacture, processing, use, or disposal of the new chemical substance at sites you control. Provide the CAS Registry Number if available.

Byproduct (1)	CAS Registry Number (2)	Confidential

☐ *Mark (X) this box if you attach a continuation sheet.*

Part I— GENERAL INFORMATION — Continued

Section C — PRODUCTION, IMPORT, AND USE INFORMATION

Mark (X) the "Confidential" box next to any item you claim as confidential.

1. **Production volume** — Estimate the **maximum** production volume during the first 12 months of production. Also estimate the **maximum** production volume for any consecutive 12-month period during the first three years of production.

Maximum first 12-month production (kg/yr)	Maximum 12-month production (kg/yr)

2. **Use Information**
You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the new substance, and other use information. Mark (X) the "Confidential" box next to any item you claim as confidential.

a. (1) — Describe each intended category of use of the new chemical substance by function and application.
(2) — Estimate the percent of total production for the first three years devoted to each category of use.
(3) — Estimate the percent of the new substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use.
(4) — Mark (X) whether the use is site-limited, industrial, commercial, or consumer. Mark more than one column if appropriate.
Read the **Instructions Manual** for examples.

Category of use (1)	Confidential	Production (percent) (2)	Confidential	Formulation (percent) (3)	Confidential	*Mark (X) appropriate columns* (4)			
						Site-limited	Industrial	Commercial	Consumer
		%		%					
		%		%					
		%		%					
		%		%					

☐ *Mark (X) this box if you attach a continuation sheet.*

b. Generic use description — If you claim any category of use description in subsection 2a as confidential, enter a generic description of that category. Read the **Instructions Manual** for examples of generic use descriptions.

☐ *Mark (X) this box if you attach a continuation sheet.*

3. **Hazard Information** — Include in the notice a copy or reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person regarding protective equipment or practices for the safe handling, transport, use, or disposal of the new chemical substance. List in part III any hazard information you include.

☐ *Mark (X) this box if you attach hazard information.*

Part II — HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

Section A — INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER

Complete section A for each type of manufacture, processing, or use operation involving the new chemical substance at industrial sites you control.

Mark (X) the "Confidential" box next to any item you claim as confidential.

Operation description **Confi-dential**

a. Identity– Enter the identity of the site at which the operation will occur.

Name

Site address (number and street)

City, County, State, ZIP code

If the same operation will occur at more than one site, enter the number of sites →
Identify the additional sites on a continuation sheet.

☐ *Mark (X) this box if you attach a continuation sheet.*

b. Type — *Mark (X)*

1 ☐ Manufacturing 2 ☐ Processing 3 ☐ Use

c. Amount and Duration – *Complete 1 or 2 as appropriate*

1. Batch	Maximum kg/batch	Hours/batch	Batches/year
2. Continuous	Maximum kg/day	Hours/day	Days/year

d. Process description
- **(1)** Diagram the major unit operation steps and chemical conversions.
- **(2)** Provide the identity, the approximate weight (by kg/day or kg/batch), and entry point of all feedstocks (including reactants, solvents, and catalysts).
- **(3)** Identify by number the points of release to the environment of the new chemical substance.

☐ *Mark (X) this box if you attach a continuation sheet.*

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Part II — HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE — Continued

Section A — INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER — Continued

2. Occupational Exposure

You must make separate confidentiality claims for the description of worker activity, physical form of the new chemical substance, number of workers exposed, and duration of activity. Mark (X) the "Confidential" box next to any item you claim as confidential.

(1) — Describe the activities in which workers may be exposed to the new chemical substance. Include activities in which workers wear protective
(2) — Indicate the physical form(s) of the new chemical substance at the time of exposure.
(3) — Estimate the maximum number of workers involved in each activity.
(4) and (5) — Estimate the maximum duration of the activity for any worker in hours per day and days per year.

Worker activity (1)	Confidential	Physical form(s) (2)	Confidential	Maximum number (3)	Confidential	Maximum duration	
						Hrs/day (4)	Days/yr (5)

☐ *Mark (X) this box if you attach a continuation sheet.*

3. Environmental Release and Disposal

You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.

(1) — Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).
(2) — Estimate the amount of the new chemical substance released directly to the environment or into control technology (in kg/day or kg/batch
(3) — Identify the media (air, land, or water) to which the new substance will be released from that release point.
(4) — Describe control technology, if any, that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method.
(5) — Identify the destination(s) of releases to water.

Release Number (1)	Amount of new substance released (2)	Confidential	Media of release (3)	Control technology (4)

(5) Mark (X) the destination(s) of releases to water.

1 ☐ POTW (publicly owned treatment works)
2 ☐ Navigable waterway
3 ☐ Other — *Specify*

☐ *Mark (X) this box if you attach a continuation sheet.*

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Part II – HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE – Continued

Section B – INDUSTRIAL SITES CONTROLLED BY OTHERS

Complete section B for each type of processing or use operation involving the new chemical substance at sites you do not control.

To claim information in this section as confidential, circle or bracket the ***specific*** *information that you claim as confidential.*

Operation description

Describe the typical processing or use operation. Identify the unit operation steps which may occur during the operation. Estimate the number of sites at which the operation is likely to occur. Identify situations in which worker exposure to and/or environmental release of the new chemical substance may occur. Estimate the percent of new chemical substance as formulated in products manufactured for commercial purposes in the operation or as used in the operation. Estimate the number of workers exposed and the duration of exposure. Identify controls which limit worker exposure and environmental release if typically used. Identify byproducts which may result from the operation.

☐ *Mark (X) this box if you attach a continuation sheet.*

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Part III — LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form and test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of the attachments. In the column below, enter the inclusive page numbers of each attachment.

Mark (X) the "Confidential" box next to any attachment **name** you claim as confidential. Read the **Instructions Manual** for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the notice form a sanitized version of any attachment in which you claim information as confidential.

Attachment name	Attachment page number(s)	

☐ *Mark (X) this box if you attach a continuation sheet. Enter the attachment name and number.*

PART 721—SIGNIFICANT NEW USES OF CHEMICAL SUBSTANCES

Subpart A—General Provisions

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721.1 Scope and applicability.
721.3 Definitions.
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721.50 Applicability.
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721.90 Release to water.
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Subpart C—Recordkeeping Requirements

721.100 Applicability.
721.125 Recordkeeping requirements.

Subpart D—Expedited Process for Issuing Significant New Use Rules for Selected Chemical Substances and Limitation or Revocation of Selected Significant New Use Rules

721.160 Notification requirements for new chemical substances subject to section 5(e) orders.
721.170 Notification requirements for selected new chemical substances that have completed premanufacture review.
721.185 Limitation or revocation of certain notification requirements.

Subpart E—Significant New Uses for Specific Chemical Substances

721.266 Adipic acid, polymer with 1,4-cyclohexane-dimethanol, dipropylene glycol, alkanepolyol, substituted alkanolamines, and carbonmonocyclic dicarboxylic acid (generic name).
721.288 Alkanepolyol phosphate ester (generic name).
721.291 Monosubstituted alkoxyaminotrazines (generic name).

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721.295 Reaction products of secondary alkyl amines with a substituted benzenesulfonic acid and sulfuric acid (generic name).
721.296 Alkylphenoxypolyalkoxyamine (generic name).
721.350 11-Aminoundecanoic acid.
721.400 Disubstituted diamino anisole.
721.445 Sodium salt of an alkylated, sulfonated aromatic (generic name).
721.450 Substituted aromatic (generic).
721.462 Benzenamine, 4-chloro-2-methyl-; benzenamine, 4-chloro-2-methyl-, hydrochloride; and benzenamine, 2-chloro-6-methyl-.
721.520 Substituted polyglycidyl benzeneamine.
721.523 Brominated aromatic compound (generic name).
721.550 1,2-Benzenediamine, 4-ethoxy, sulfate.
721.555 1,3-Benzenediamine, 4-(1,1-dimethylethyl)-ar-methyl.
721.557 Mixture of: 1,3-benzenediamine, 2-methyl-4,6-bis(methylthio)- (CAS NO. 104983-85-9) and 1,3-benzenediamine, 4-methyl-2,6-bis(methylthio)- (CAS NO. 102093-68-5).
721.575 Benzoic acid, 3,3′-methylenebis [6 amino-, di-2-propenyl ester.
721.600 Polybrominated biphenyls.
721.612 N,N′-Bis(2-(2-(3-alkyl)thiazoline)vinyl)-1,4-phenylenediamine methyl sulfate double salt (generic name).
721.617 Boric acid, alkyl and substituted alkyl esters (generic name).
721.648 1-Chloro-2-bromoethane.
721.770 Coconut oil, reaction products with tetrahydroxy branched alkane esters of trisubstituted benzenepropanoic acid (generic name).
721.782 Aromatic diamines (generic name).
721.783 Dialkenylamide (generic name).
721.792 Alkylated diarylamine, sulfurized (generic name).
721.800 Dicarboxylic acid monoester.
721.818 Dimer acids, polymer with polyalkylene glycol, bisphenol A-diglycidyl ether, and alkylenepolyols polyglycidyl ethers (generic name).
721.853 Alkylated diphenyl oxide (generic name).
721.950 Epibromohydrin.
721.975 Trichlorobutylene oxide.
721.976 Perfluoroalkyl epoxide (generic name).
721.1060 Formaldehyde, polymer with bisphenol A and substituted phenol (generic name).
721.1078 Haloalkyl substituted cyclic ethers.
721.1082 Substituted ethylene diamine, methyl sulfate quarternized (generic name).

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721.1150 Hexachloronorbornadiene.
721.1175 Hexafluoropropylene oxide.
721.1200 Hexamethylphosphoramide.
721.1250 Isopropylamine distillation residues and ethylamine distillation residues.
721.1300 Methyl n-butyl ketone.
721.1460 Naphthalene,1,2,3,4-tetrahydro(1-phenylethyl) (specific name).
721.1465 2-Napthalenecarboxamide-N-aryl-3-hydroxy-4-arylazo (generic name).
721.1475 Pentachloroethane.
721.1483 6-Nitro-2(3H)-benzoxazolone.
721.1488 Nitrothiophenecarboxylic acid, ethyl ester, bis[[[(substituted)]amino]alkylphenyl]azo] (generic name).
721.1515 Pentabromoethylbenzene.
721.1542 Trisubstituted phenol (generic name).
721.1560 1,1-Dimethylpropyl peroxyester (generic name).
721.1565 Substituted alkyl peroxyhexane carboxylate (mixed isomers) (generic name).
721.1585 Substituted phosphate ester (generic).
721.1608 Phosphonium salt (generic name).
721.1630 Polymer of alkanepolyol and polyalkylpolyisocyanatocarbomonocycle, acetone oxime-blocked (generic name).
721.1634 Polymer of alkenoic acid, substituted alkylacrylate sodium salt (generic name).
721.1750 Potassium N,N-bis (hydroxyethyl) cocoamine oxide phosphate and potassium N,N-bis (hydroxyethyl) tallowamine oxide phosphate.
721.1875 Substituted methylpyridine and substituted 2-phenoxypyridine.
721.1890 Carboxy alkyl silyl salt (generic name).
721.2070 Alkylene glycol terephthalate and substituted benzoate esters (generic name).
721.2100 Derivative of tetrachloroethylene.
721.2132 Tetraglycidalamines (generic name).
721.2180 Substituted thiazino hydrazine salt (generic name).
721.2192 Disubstituted alkyl triazines (generic name).
721.2200 Tris (2,3-dibromopropyl) phosphate.
721.2480 Urea, condensate with poly[oxy(methyl-1,2ethanediyl)]-α-(2-aminomethylethyl)-μ-(2-aminoethylethoxy) (generic name).
721.2490 Urea, (hexahydro-6-methyl-2-oxopyrimidinyl)-.
721.2500 Polyamine ureaformaldehyde condensate (specific name).
721.2550 Urethane.
721.2585 3-Alkyl-2-(2-anilino)vinyl thiazolinium salt (generic name).

AUTHORITY: 15 U.S.C. 2604, 2607, and 2625(c).

Subpart A—General Provisions

§ 721.1 Scope and applicability.

(a) This part identifies uses of chemical substances which EPA has determined are significant new uses under the authority of section 5(a)(2) of the Toxic Substances Control Act. In addition, it specifies procedures for manufacturers, importers, and processors to report on those significant new uses. This subpart A contains general provisions applicable to this part. subpart B of this part identifies generic requirements for certain significant new uses cross referenced in specific provisions of subpart E of this part. subpart C of this part identifies generic reporting requirements for certain significant new uses cross referenced in specific provisions of subpart E of this part. subpart E of this part identifies chemical substances and their significant new uses.

(b) This subpart A contains provisions governing submission and review of notices for the chemical substances and significant new uses identified in subpart E of this part. The provisions of this subpart A apply to the chemical substances and significant new uses identified in subpart E of this part, except to the extent that they are specifically modified or supplanted by specific requirements in subpart E of this part. In the event of a conflict between the provisions of this subpart A and the provisions of subpart E of this part, the provisions of subpart E of this part shall govern.

(c) The provisions of Part 720 of this Chapter apply to this Part 721. For purposes of this Part 721, wherever the phrase "new chemical substance" appears in Part 720 of this chapter, it shall mean the chemical substance subject to this Part 721. In the event of a conflict between the provisions of Part 720 of this chapter and the provisions of this Part 721, the provisions of this Part 721 shall govern.

[53 FR 28358, July 27, 1988]

§ 721.3 Definitions.

The definitions in section 3 of the Act, 15 U.S.C. 2602, and § 720.3 of this chapter apply to this part. In addition, the following definitions apply to this part:

"Acutely toxic effects" A chemical substance produces acutely toxic effects if it kills within a short time period (usually 14 days):

(1) At least 50 percent of the exposed mammalian test animals following oral administration of a single dose of the test substance at 25 milligrams or less per kilogram of body weight (LD_{50}).

(2) At least 50 percent of the exposed mammalian test animals following dermal administration of a single dose of the test substance at 50 milligrams or less per kilogram of body weight (LD_{50}).

(3) At least 50 percent of the exposed mammalian test animals following administration of the test substance for 8 hours or less by continuous inhalation at a steady concentration in air at 0.5 milligrams or less per liter of air (LC_{50}).

"CAS Number" means Chemical Abstracts Service Registry Number assigned to a chemical substance on the Inventory.

"Chemical name" means the scientific designation of a chemical substance in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or the Chemical Abstracts Service's rules of nomenclature, or a name which will clearly identify a chemical substance for the purpose of conducting a hazard evaluation.

"Chemical protective clothing" means items of clothing that provide a protective barrier to prevent dermal contact with chemical substances of concern. Examples can include, but are not limited to: full body protective clothing, boots, coveralls, gloves, jackets, and pants.

"Commercial use" means the use of a chemical substance or any mixture containing the chemical substance in a commercial enterprise providing saleable goods or a service to consumers (e.g., a commercial dry cleaning establishment or painting contractor).

"Common name" means any designation or identification such as code name, code number, trade name, brand name, or generic chemical name used to identify a chemical substance other than by its chemical name.

"Consumer" means a private individual who uses a chemical substance or any product containing the chemical substance in or around a permanent or temporary household or residence, during recreation, or for any personal use or enjoyment.

"Consumer product" means a chemical substance that is directly, or as part of a mixture, sold or made available to consumers for their use in or around a permanent or temporary household or residence, in or around a school, or in recreation.

"Customer" means any person to whom a manufacturer, importer, or processor distributes any quantity of a chemical substance, or of a mixture containing the chemical substance, whether or not a sale is involved.

"Director of the Office of Toxic Substances" means the Director of the EPA Office of Toxic Substances or any EPA employee delegated by the Office Director to carry out the Office Director's functions under this part.

"Employer" means any manufacturer, importer, processor, or user of chemical substances or mixtures.

"Environmentally transformed" A chemical substance is "environmentally transformed" when its chemical structure changes as a result of the action of environmental processes on it.

"Identity" means any chemical or common name used to identify a chemical substance or a mixture containing that substance.

"Immediate use" A chemical substance is for the "immediate use" of a person if it is under the control of, and used only by, the person who transferred it from a labeled container and will only be used by that person within the work shift in which it is transferred from the labeled container.

"Impervious" Chemical protective clothing is "impervious" to a chemical substance if the substance causes no chemical or mechanical degradation, permeation, or penetration of the chemical protective clothing under the conditions of, and the duration of, exposure.

"Manufacturing stream" means all reasonably anticipated transfer, flow, or disposal of a chemical substance, regardless of physical state or concentration, through all intended operations of manufacture, including the cleaning of equipment.

"Metalworking fluid" means a liquid of any viscosity or color containing intentionally added water and used in metal machining operations for the purpose of cooling, lubricating, or rust inhibition.

"MSDS" means material safety data sheet, the written listing of data for the chemical substance as required under § 721.72(c).

"NIOSH" means the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services.

"Non-enclosed process" means any equipment system (such as an open-top reactor, storage tank, or mixing vessel) in which a chemical substance is manufactured, processed, or otherwise used where significant direct contact of the bulk chemical substance and the workplace air may occur.

"Non-industrial use" means use other than at a facility where chemical substances or mixtures are manufactured, imported, or processed.

"Personal protective equipment" means any chemical protective clothing or device placed on the body to prevent contact with, and exposure to, an identified chemical substance or substances in the work area. Examples include, but are not limited to, chemical protective clothing, aprons, hoods, chemical goggles, face splash shields, or equivalent eye protection, and various types of respirators. Barrier creams are not included in this definition.

"Powder or dry solid form" means a state where all or part of the substance would have the potential to become fine, loose, solid particles.

"Principal importer" means the first importer who, knowing that a chemical substance will be imported for a significant new use rather than manufactured in the United States, specifies the chemical substance and the amount to be imported. Only perso who are incorporated, licensed, doing business in the United Stat may be principal importers.

"Process for commercial purpos means the preparation of a chemic substance or mixture containing th chemical substance, after manufactu of the substance, for distribution commerce with the purpose of obtai ing an immediate or eventual comme cial advantage for the processor. Pr essing of any amount of a chemic substance or mixture containing th chemical substance is included in th definition. If a chemical substance mixture containing impurities is pro essed for commercial purposes, the i purities also are processed for co mercial purposes.

"Process solely for export" means process for commercial purposes sole for export from the United Stat under the following restrictions on tivity in the United States: Processi must be performed at sites under th control of the processor; distributi in commerce is limited to purposes export; and the processor may not u the chemical substance except in sma quantities solely for research and d velopment.

"Process stream" means all reaso ably anticipated transfer, flow, or di posal of a chemical substance, regar less of physical state or concentratio through all intended operations processing, including the cleaning equipment.

"Recipient" means any person w purchases or otherwise obtains chemical substance directly from person who manufacturers, imports, processes the substance.

"Serious acute effects" mea human injury or human disease pro esses that have a short latency peri for development, result from sho term exposure to a chemical su stance, or are a combination of the factors and which are likely to res in death or severe or prolonged in pacitation.

"Serious chronic effects" mea human injury or human disease pro esses that have a long latency peri for development, result from lo term exposure to a chemical su stance, or are a combination of th factors and which are likely to result in death or severe or prolonged incapacitation.

"Short-term test indicative of carcinogenic potential" means either any limited bioassay that measures tumor or preneoplastic induction, or any test indicative of interaction of a chemical substance with DNA (i.e., positive response in assays for gene mutation, chromosomal aberrations, DNA damage and repair, or cellular transformation).

"Short-term test indicative of the potential to cause a developmentally toxic effect" means either any *in vivo* preliminary development toxicity screen conducted in a mammalian species, or any *in vitro* developmental toxicity screen, including any test system other than the intact pregnant mammal, that has been extensively evaluated and judged reliable for its ability to predict the potential to cause developmentally toxic effects in intact systems across a broad range of chemicals or within a class of chemicals that includes the substance of concern.

"Significant adverse environmental effects" means injury to the environment by a chemical substance which reduces or adversely affects the productivity, utility, value, or function of biological, commercial, or agricultural resources, or which may adversely affect a threatened or endangered species. A substance will be considered to have the potential for significant adverse environmental effects if it has one of the following:

(1) An acute aquatic EC_{50} of 1 mg/L or less.

(2) An acute aquatic EC_{50} of 20 mg/L or less where the ratio of aquatic vertebrate 24-hour to 48-hour EC_{50} is greater than or equal to 2.0.

(3) A Maximum Acceptable Toxicant Concentration (MATC) of less than or equal to 100 parts per billion (100 ppb).

(4) An acute aquatic EC_{50} of 20 mg/L or less coupled with either a measured bioconcentration factor (BCF) equal to or greater than 1,000x or in the absence of bioconcentration data a log P value equal to or greater than 4.3.

"Site" means a contiguous property unit. Property divided only by a public right-of-way is one site. There may be more than one manufacturing plant on a single site.

"Site-limited intermediate" means an intermediate manufactured, processed, and used only within a site and not distributed in commerce other than as an impurity or for disposal. Imported intermediates cannot be "site-limited."

"Spray application" means any method of projecting a jet of vapor of finely divided liquid onto a surface to be coated; whether by compressed air, hydraulic pressure, electrostatic forces, or other methods of generating a spray.

"Use stream" means all reasonably anticipated transfer, flow, or disposal of a chemical substance, regardless of physical state or concentration, through all intended operations of industrial, commercial, or consumer use.

"Waters of the United States" has the meaning set forth in 40 CFR 122.2.

"Work area" means a room or defined space in a workplace where a chemical substance is manufactured, processed, or used and where employees are present.

"Workplace" means an establishment at one geographic location containing one or more work areas.

[53 FR 28358, July 27, 1988, as amended at 54 FR 31306, July 27, 1989]

§ 721.5 Persons who must report.

(a) The following persons must submit a significant new use notice as specified under the provisions of section 5(a)(1)(B) of the Act, Part 720 of this chapter, and § 721.25:

(1) A person who intends to manufacture, import, or process for commercial purposes a chemical substance identified in a specific section in subpart E of this part, and intends to engage in a significant new use of the substance identified in that section.

(2) A person who intends to manufacture, import, or process for commercial purposes a chemical substance identified in a specific section in subpart E of this part, and intends to distribute the substance in commerce. A person described in this paragraph is not required to submit a significant new use notice if that person can docu-

ment one or more of the following as to each recipient of the substance from that person:

(i) That the person has notified the recipient, in writing, of the specific section in subpart E of this part which identifies the substance and its designated significant new uses.

(ii) That the recipient has knowledge of the specific section in subpart E of this part which identifies the substance and its designated significant new uses.

(iii) That the recipient cannot undertake any significant new use described in the specific section in subpart E of this part.

(b) A person described in paragraph (a)(2) of this section must submit a significant new use notice if that person has knowledge at the time of commercial distribution of the substance identified in the specific section in subpart E of this part that a recipient intends to engage in a designated significant new use of that substance without submitting a notice under this part.

(c) A person who processes a chemical substance identified in a specific section in subpart E of this part for a significant new use of that substance is not required to submit a significant new use notice if that person can document each of the following:

(1) That the person does not know the specific chemical identity of the chemical substance being processed.

(2) That the person is processing the chemical substance without knowledge that the substance is identified in subpart E of this part.

(d)(1) If at any time after commencing distribution in commerce of a chemical substance identified in a specific section in subpart E of this part a person described in paragraph (a)(2) of this section has knowledge that a recipient of the substance is engaging in a significant new use of that substance designated in that section without submitting a notice under this part, the person is required to cease supplying the chemical substance to that recipient and to submit a significant new use notice for that chemical substance and significant new use, unless the person is able to document each of the following:

(i) That the person has notified the recipient and EPA enforcement authorities (at the address in paragraph (d)(1)(iii) of this section), in writing within 15 working days of the time the person develops knowledge that the recipient is engaging in a significant new use, that the recipient is engaging in a significant new use without submitting a significant new use notice.

(ii) That, within 15 working days of notifying the recipient as described in paragraph (d)(1)(i) of this section, the person received from the recipient, in writing, a statement of assurance that the recipient is aware of the terms of the applicable section in subpart E of this part and will not engage in the significant new use.

(iii) That the person has promptly provided EPA enforcement authorities with a copy of the recipient's statement of assurance described in paragraph (d)(1)(ii) of this section. The copy must be sent to the Director, Office of Compliance Monitoring (EN-342), Environmental Protection Agency, 401 M St. SW., Washington, DC 20460.

(2) If EPA notifies the manufacturer, importer, or processor that the recipient is engaging in a significant new use after providing the statement of assurance described in paragraph (d)(1)(ii) of this section and without submitting a notice under this part, the manufacturer, importer, or processor shall immediately cease distribution to that recipient until the manufacturer, importer, or processor or the recipient has submitted a significant new use notice under this part and the notice review period has ended.

(3) If, after receiving a statement of assurance from a recipient under paragraph (d)(1)(ii) of this section, a manufacturer, importer, or processor has knowledge that the recipient is engaging in a significant new use without submitting a notice under this part, the manufacturer, importer, or processor must immediately cease distributing the substance to that recipient and notify EPA enforcement authorities at the address identified in paragraph (d)(1)(iii) of this section. The manufacturer, importer, or processor may not resume distribution to that recip

nt until any one of the following has ccurred:

(i) The manufacturer, importer, or rocessor has submitted a significant ew use notice under this part and the otice review period has ended.

(ii) The recipient has submitted a ignificant new use notice under this art and the notice review period has nded.

(iii) The manufacturer, importer, or rocessor has received notice from PA enforcement authorities that it ay resume distribution to that recipint.

(e) Any significant new use notice reating to import of a substance must e submitted by the principal importr.

53 FR 28359, July 27, 1988]

721.11 Applicability determination when the specific chemical identity is confidential.

(a) A person who intends to manuacture, import, or process a chemical ubstance which is described by a geeric chemical name is subpart E of his part may ask EPA whether the ubstance is subject to the requireents of this part. EPA will answer uch an inquiry only if EPA deterines that the person has a *bona fide* ntent to manufacture, import, or rocess the chemical substance for ommercial purposes.

(b) To establish a *bona fide* intent to anufacture, import, or process a hemical substance, the person who ntends to manufacture, import, or rocess the chemical substance must ubmit the following information in riting to the Office of Toxic Subtances, Document Control Officer, TS-790, 401 M St. SW., Washington, DC 20460: ATTN: SNUR *bona fide* ubmission.

(1) The specific chemical identity of he chemical substance that the erson intends to manufacture, mport, or process.

(2) A signed statement that the erson intends to manufacture, mport, or process the chemical subtance for commercial purposes.

(3) A description of the research and evelopment activities conducted to ate, and the purpose for which the person will manufacture, import, or process the chemical substance.

(4) An elemental analysis.

(5) Either an X-ray diffraction pattern (for inorganic substances), a mass spectrum (for most other substances), or an infrared spectrum of the particular chemical substance, or, if such data do not resolve uncertainties with respect to the identity of the chemical substance, additional or alternative spectra or other data to identify the substance.

(c) If an importer or processor cannot provide all the information required in paragraph (b) of this section because it is claimed as confidential business information by the importer's or processor's manufacturer or supplier, the manufacturer or supplier may supply the information directly to EPA.

(d) EPA will review the information submitted by the manufacturer, importer, or processor under paragraph (b) of this section to determine whether than person has shown a *bona fide* intent to manufacture, import, or process the chemical substance. If necessary, EPA will compare this information either to the information requested for the confidential chemical substance under § 710.7(e)(2)(v) of this chapter or the information requested under § 720.85(b)(3)(iii) of this chapter.

(e) If the manufacturer, importer, or processor has shown a *bona fide* intent to manufacture, import, or process the substance and has provided sufficient unambiguous chemical identity information to enable EPA to make a conclusive determination as to the identity of the substance, EPA will inform the manufacturer, importer, or processor whether the chemical substance is subject to this part and, if so, which section in subpart E of this part applies.

(f) A disclosure to a person with a *bona fide* intent to manufacture, import, or process a particular chemical substance that the substance is subject to this part will not be considered public disclosure of confidential business information under section 14 of the Act.

(g) EPA will answer an inquiry on whether a particular chemical substance is subject to this part within 30 days after receipt of a complete submission under paragraph (b) of this section.

[53 FR 28359, July 27, 1988]

§ 721.20 Exports and imports.

Persons who intend to export a chemical substance identified in subpart E of this part, or in any proposed rule which would amend subpart E of this part, are subject to the export notification provisions of section 12(b) of the Act. The regulations that interpret section 12(b) appear at 40 CFR Part 707. Persons who import a substance identified in a specific section in subpart E of this part are subject to the import certification requirements under section 13 of the Act, which are codified at 19 CFR 12.118 through 12.127 and 127.28. The EPA policy in support of the import certification requirements appears at 40 CFR Part 707.

[53 FR 28360, July 27, 1988]

§ 721.25 Notice requirements and procedures.

(a) Each person who is requuired to submit a significant new use notice under this part must submit the notice at least 90 calendar days before commencing manufacture, import, or processing of a chemical substance identified in subpart E of this part for a significant new use. The submitter must comply with any applicable requirement of section 5(b) of the Act, and the notice must include the information and test data specified in section 5(d)(1) of the Act. The notice must be submitted on the notice from in Appendix A to Part 720 of this chapter and must comply with the requirements of Part 720, except to the extent that they are inconsistent with this Part 721.

(b) If two or more persons are required to submit a significant new use notice for the same chemical substance and significant new use identified in subpart E of this part, they may submit a joint notice to EPA. Persons submitting a joint notice must individually complete the certification section of Part I of the required notification form. Persons who are required to submit individually, but ele submit jointly, remain indivi liable for the failure to submi quired information which is know or reasonably ascertainable by t and test data in their possessi control.

(c) EPA will process the notice i cordance with the procedures of 720 of this chapter, expect to extent they are inconsistent with Part 721.

(d) Any person submitting a si cant new use notice in response to requirements of this Part 721 shal manufacture, import, or proce chemical substance identified in part E of this part for a signif new use until the notice review pe including all extensions and su sions, has expired.

[53 FR 28360, July 27, 1988]

§ 721.30 EPA approval of alternative trol measures.

(a) In certain sections of subp of this part, significant new use the identified substances are desc as the failure to establish and i ment programs providing for th of either: specific measures to co worker exposure to or release of stances which are identified in sections, or alternative measur control worker exposure or env mental release which EPA has mined provide substantially the degree of protection as the spe control measures. Persons who m facture, import, or process a che substance identified in such sec and who intend to employ altern measures to control worker exp or environmental release must s a request to EPA for a determin of equivalency before comme manufacture, import, or processi volving the alternative control ures.

(b) A request for a determinati equivalency must be submitted in ing to the Office of Toxic Subst Document Control Officer, T 401 M St. SW., Washington, DC ATTN: SNUR Equivalency Deter tion, and must contain:

(1) The name of the submitter.

(2) The specific chemical identity of the substance.

(3) The citation for the specific section in subpart E of this Part which pertains to the substance for which the request is being submitted.

(4) A detailed description of the activities involved.

(5) The specifications of the alternative worker exposure control measures or environmental release control measures.

(6) An analysis justifying why such alternative control measures provide substantially the same degree of protection as the specific control measures identified in the specific section in subpart E of this part which pertains to the substance for which the request is being submitted.

(7) The data and information described in §§ 720.50 (a) and (b) of this chapter unless such data and information have already been submitted to the Office of Toxic Substances, EPA.

(c) Requests for determinations of equivalency will be reviewed by EPA within 45 days. Determinations under this paragraph will be made by the Director, Office of Toxic Substances, or designee. Notice of the results of such determinations will be mailed to the submitter.

(d) If EPA notifies the submitter under paragraph (c) of this section that EPA has determined that the alternative control measures provide substantially the same degree of protection as the specified control measures identified in the specified section of subpart E of this part which pertains to the substance for which the request is being submitted, the submitter may commence manufacture, import, or processing in accordance with the specifications for alternative worker exposure control measures or environmental release control measures identified in the submitter's request, and may alter any corresponding notification to workers to reflect such alternative controls. Deviations from the activities described in the EPA notification constitute a significant new use and are subject to the requirements of this part.

[53 FR 28360, July 27, 1988]

§ 721.35 Compliance and enforcement.

(a) Failure to comply with any provision of this part is a violation of section 15(1) of the Act (15 U.S.C. 2614).

(b) Using for commercial purposes a chemical substance which a person knew or had reason to know was manufactured, imported, or processed in violation of this part is a violation of section 15(2) of the Act (15 U.S.C. 2614).

(c) Failure or refusal to permit access to or copying of records, as required by section 11 of the Act, is a violation of section 15(3) of the Act (15 U.S.C. 2614).

(d) Failure or refusal to permit entry or inspection, as required by section 11 of the Act, is a violation of section 15(4) of the Act.

(e) Violators of the Act or of this part may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation. The submission of false or misleading information in connection with the requirement of any provision of this part may subject persons to penalties calculated as if they never filed a notice.

(f) Under the authority of sections 7 and 17 of the Act, EPA may:

(1) Seek to enjoin the manufacture, import, or processing of a chemical substance in violation of this part.

(2) Act to seize any chemical substance which is being manufactured, imported, or processed in violation of this part.

(3) Take any other appropriate action.

[53 FR 28361, July 27, 1988]

§ 721.40 Recordkeeping.

Any person subject to the requirements of this part must retain documentation of information contained in that person's significant new use notice. This documentation must be maintained for a period of 5 years from the date of the submission of the significant new use notice.

[53 FR 28361, July 27, 1988]

§ 721.45 Exemptions.

The persons identified in § 721.5 are not subject to the notification requirements of § 721.25 for a chemical substance identified in subpart E of this part, unless otherwise specified in a specific section in subpart E, if:

(a) The person has applied for and has been granted an exemption for test marketing the substance for a significant new use identified in subpart E of this part in accordance with section 5(h)(1) of the Act and § 720.38 of this chapter.

(b) The person manufactures, imports, or processes the substance for a significant new use identified in subpart E of this part in small quantities solely for research and development in accordance with § 721.47.

(c) The person has applied for and been granted an exemption under section 5(h)(5) of the Act.

(d) The person manufactures, imports, or processes the substance only as an impurity.

(e) The person manufactures, imports, or processes the substance only as a byproduct which is used only by public or private organizations that (1) burn it as a fuel, (2) dispose of it as a waste, including in a landfill or for enriching soil, or (3) extract component chemical substances from it for commercial purposes.

(f) The person imports or processes the substance as part of an article.

(g) The person manufactures or processes the substance solely for export and, when distributing the substance in commerce, labels the substance in accordance with section 12(a)(1)(B) of the Act.

(h) The person submits a significant new use notice for the substance prior to the promulgation date of the section in subpart E of this part which identifies the substance, and the person receives written notification of compliance from EPA prior to the effective date of such section. The notice submitter must comply with any applicable requirement of section 5(b) of the Act. The notice must include the information and test data specified in section 5(d)(1) of the Act and must be submitted on the notice form in Appendix A to Part 720 of this chapter. For purposes of this exemption, the specific section in subpart E of this part which identifies the substance and §§ 721.1, 721.3, 721.11, 721.35, and 721.40 apply; after the effective date of the section in subpart E of this part which identifies the substance, § 721.5 applies and § 721.2 continues to apply. EPA will provide the notice submitter with written notification of compliance only if one of the following occurs:

(1) EPA is unable to make the finding that the activities described in the significant new use notice will or may present an unreasonable risk of injury to health or the environment under reasonably foreseeable circumstances.

(2) EPA and the person negotiate a consent order under section 5(e) of the Act, such order to take effect on the effective date of the section in subpart E of this part which identifies the substance.

(i) The person is operating under the terms of a consent order issued under section 5(e) of the Act applicable to that person. If a provision of such section 5(e) order is inconsistent with a specific significant new use identified in subpart E of this part, abiding by the provision of the section 5(e) order exempts the person from submitting a significant new use notice for that specific significant new use.

[53 FR 28361, July 27, 1988]

§ 721.47 Conditions for research and development exemption.

(a) A person who manufactures, imports, or processes a chemical substance identifies in subpart E of this part for a significant new use identified in subpart E of this part is not subject to the notification requirements of § 721.25 if the following conditions are met:

(1) The person manufactures, imports, or processes the substance for the significant new use in small quantities solely for research and development.

(2) The manufacturer, importer, or processor notifies all persons in its employ or to whom it directly distributes the chemical substance, who are engaged in experimentation, research, or analysis on the chemical substance, including the manufacture, processing, use, transport, storage, and disposal of the substance associated with research and development activities, of any risk

health, identified under paragraph
) of this section, which may be asso-
ted with the substance. The notifi-
tion must be made in accordance
th paragraph (c) of this section.
3) The chemical substance is used
, or directly under the supervision
a technically qualified individual.
b)(1) To determine whether notifi-
tion under paragraph (a)(2) of this
ction is required, the manufacturer,
porter, or processor must review
d evaluate the following informa-
n to determine whether there is
ason to believe there is any risk to
alth which may be associated with
e chemicals substance:
i) Information in its possession, or
ntrol concerning any significant ad-
rse reaction by persons exposed to
e chemical substance which may
asonably be associated with such ex-
sure.
ii) Information provided to the
anufacturer, importer, or processor
a supplier or any other person con-
rning a health risk believed to be as-
ciated with the substance.
iii) Health and environmental ef-
cts data in its possession or control
ncerning the substance.
iv) Information on health effects
hich accompanies any EPA rule or
der issued under section 4, 5, or 6 of
e Act that applies to the substance
d of which the manufacturer, im-
rter, or processor has knowledge.
(2) When the research and develop-
ent activity is conducted solely in a
boratory and exposure to the chemi-
l substance is controlled through
e implementation of prudent labora-
ry practices for handling chemical
bstances of unknown toxicity, and
y distribution, except for purposes
disposal, is to other such laborato-
es for further research and develop-
ent activity, the information speci-
ed in paragraph (b)(1) of this section
eed not be reviewed and evaluated.
For purposes of this paragraph (b)(2),
laboratory is defined as a contained
esearch facility where relatively small
uantities of chemical substances are
sed on a pro-production basis, and
here activities involve the use of con-
ainers for reactions, transfers, and
ther handling of substances designed
to be easily manipulated by a single individual).

(c)(1) The manufacturer, importer, or processor must notify the persons identified in paragraph (a)(2) of this section by means of a container labeling system, conspicuous placement of notices in areas where exposure may occur, written notification to each person potentially exposed, or any other method of notification which adequately informs persons of health risks which the manufacturer, importer, or processor has reason to believe may be associated with the substance, as determined under paragraph (b)(1) of this section.

(2) If the manufacturer, importer, or processor distributes a chemical substance manufactured, imported, or processed under this section to persons not in its employ, the manufacturer, importer, or processor must in written form:

(i) Notify those persons that the substance is to be used only for research and development purposes.

(ii) Provide the notice of health risks specified in paragraph (c)(1) of this section.

(3) The adequacy of any notification under this section is the responsibility of the manufacturer, importer, or processor.

(d) Quantities of the chemical substance, or of mixtures or articles containing the chemical substance, remaining after completion of research and development activities may be:

(i) Disposed of as a waste in accordance with applicable Federal, State, and local regulations, to the extent the disposal activity is not identified as a significant new use for the substance in subpart E of this part, or

(2) Used for a commercial purpose, to the extent the use is not identified as a significant new use of the substance in subpart E of this part.

(e)(1) Persons who manufacture, import, or process a chemical substance under this section must retain the following records:

(i) Copies of or citations to information reviewed and evaluated under paragraph (b)(1) of this section to determine the need to make any notification of risk.

(ii) Documentation of the nature and method of notification under paragraph (c)(1) of this section including copies of any labels or written notices used.

(iii) Documentation of prudent laboratory practices used instead of notification and evaluation under paragraph (b)(2) of this section.

(iv) The names and addresses of any persons other than the manufacturer, importer, or processor to whom the substance is distributed, the identity of the substance, the amount distributed, and copies of the notifications required under paragraph (c)(2) of this section.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0012)

[53 FR 28361, July 27, 1988]

Subpart B—Certain Significant New Uses

SOURCE: 54 FR 31308, July 27, 1989, unless otherwise noted.

§ 721.50 Applicability.

This subpart B identifies certain significant new uses of chemical substances identified in subpart E of this part. The provisions of this subpart B apply only when referenced as applying to a chemical substance identified in subpart E of this part.

§ 721.63 Protection in the workplace.

(a) Whenever a substance is identified in subpart E of this part as being subject to this section, a significant new use of the substance is any manner or method of manufacturing, importing, or processing associated with any use of the substance without establishing a program whereby:

(1) Each person who is reasonably likely to be dermally exposed in the work area to the chemical substance through direct handling of the substance or through contact with equipment on which the substance may exist, or because the substance becomes airborne in the form listed in paragraph (a)(6) of this section, and cited in subpart E of this part for the chemical substance, is provided with, and is required to wear, personal protective equipment that provides a barrier to prevent dermal exposure to the substance in the specific work area where it is selected for use. Each such item of personal protective equipment must be selected and used in accordance with 29 CFR 1910.132 and 1910.133.

(2) In addition to any other personal protective equipment selected in paragraph (a)(1) of this section, the following items are required:

(i) Gloves.

(ii) Full body chemical protective clothing.

(iii) Chemical goggles or equivalent eye protection.

(iv) Clothing which covers any other exposed areas of the arms, legs, and torso. Clothing provided under this paragraph need not be tested or evaluated under the requirements of paragraph (a)(3) of this section.

(3) The employer is able to demonstrate that each item of chemical protective clothing, including gloves, selected provides an impervious barrier to prevent dermal exposure during normal and expected duration and conditions of exposure within the work area by any one or a combination of the following:

(i) Testing the material used to make the chemical protective clothing and the construction of the clothing to establish that the protective clothing will be impervious for the expected duration and conditions of exposure. The testing must subject the chemical protective clothing to the expected conditions of exposure, including the likely combinations of chemical substances to which the clothing may be exposed in the work area.

(ii) Evaluating the specifications from the manufacturer or supplier of the chemical protective clothing, or of the material used in construction of the clothing, to establish that the chemical protective clothing will be impervious to the chemical substance alone and in likely combination with other chemical substances in the work area.

(4) Each person who is reasonably likely to be exposed to the chemical substance by inhalation in the work area in one or more of the forms listed

in paragraph (a)(6) of this section and cited in subpart E of this part for the chemical substance, is provided with, and is required to wear, at a minimum, a NIOSH- approved respirator from one of the categories listed in paragraph (a)(5) of this section, and the respirator is used in accordance with 29 CFR 1910.134 and 30 CFR Part 11.

(5) The following NIOSH approved respirators meet the minimum requirements for paragraph (a)(4) of this section:

(i) Category 19C Type C supplied-air respirator operated in pressure demand or other positive pressure mode and equipped with a full facepiece.

(ii) Category 19C Type C supplied-air respirator operated in pressure demand or continuous flow mode and equipped with a tight-fitting facepiece.

(iii) Category 19C Type C supplied-air respirator operated in pressure demand or continuous flow mode and equipped with a hood or helmet or tight-fitting facepiece.

(iv) Category 21C air-purifying respirator equipped with a full facepiece and high efficiency particulate filters.

(v) Category 21C powered air-purifying respirator equipped with a tight-fitting facepiece and high efficiency particulate filters.

(vi) Category 21C powered air-purifying respirator equipped with a loose-fitting hood or helmet and high efficiency particulate filters.

(vii) Category 21C air-purifying respirator equipped with a high efficiency particulate filter including disposable respirators.

(viii) Category 23C air-purifying respirator equipped with a full facepiece and combination cartridges approved for paints, lacquers, and enamels. (Approval label may preclude use for some paints, lacquers, or enamels.)

(ix) Category 23C powered air-purifying respirator equipped with a tight-fitting facepiece and combination cartridges approved for paints, lacquers, and enamels. (Approval label may preclude use for some paints, lacquers, or enamels.)

(x) Category 23C powered air-purifying respirator equipped with a loose-fitting hood or helmet and combination cartridges approved for paints, lacquers, and enamels. (Approval label may preclude use for some paints, lacquers, or enamels.)

(xi) Category 23C air-purifying respirator equipped with combination cartridges approved for paints, lacquers, and enamels, including disposable respirators. (Approval label may preclude use for some paints, lacquers, or enamels.)

(xii) Category 23C air-purifying respirator equipped with a full facepiece and organic gas/vapor cartridges.

(xiii) Category 23C powered air-purifying respirator equipped with a tight-fitting facepiece and organic gas/vapor cartridges.

(xiv) Category 23C powered air-purifying respirator equipped with a loose-fitting hood or helmet and organic gas/vapor cartridges.

(xv) Category 23C air-purifying respirator equipped with organic gas/vapor cartridges, including disposable respirators.

(6) When cited in subpart E of this part for a substance, the following airborne form(s) of the substance apply to paragraphs (a)(1) and (4) of this section:

(i) Dust.

(ii) Mist.

(iii) Fume.

(iv) Smoke.

(v) Vapor.

(vi) Gas.

(b) If a substance identified in subpart E of this part is present in the work area only as a mixture, an employer is exempt from the provisions of this section if the concentration of the substance in the mixture does not exceed a concentration set in subpart E of this part. The exemption does not apply if the employer has reason to believe that during intended use or processing in the work area, the substance in the mixture may be concentrated above the level set in subpart E of this part.

(c)(1) If at any time after commencing distribution in commerce of a chemical substance that is identified in subpart E of this part as subject to this section, the person has knowledge that a recipient of the substance is engaging in an activity that is not consistent with the implementation of a program specified in paragraph (a) of this section, the person is considered to have knowledge that the recipient is engaging in a significant new use and is required to follow the procedures in § 721.5(d) unless the person is able to document the following:

(i) That the person has notified the recipient in writing within 15 working days of the time the person first has knowledge that the recipient is engaging in an activity that is not consistent with the implementation of a program specified in paragraph (a) of this section, and that the person has knowledge of the failure of implementation.

(ii) That within 15 working days of notifying the recipient that the recipient is engaging in an activity that is not consistent with the implementation of a program specified in paragraph (a) of this section the person has received from the recipient, in writing, a statement of assurance that the recipient has established the program required under paragraph (a) of this section, and will take appropriate measures to avoid activities that are inconsistent with implementation of the program required under paragraph (a) of this section.

(2) If, after receiving a statement of assurance from a recipient under paragraph (c)(1)(ii) of this section, a manufacturer, importer, or processor has knowledge that the recipient is engaging in an activity that is not consistent with the implementation of the program specified in paragraph (a) of this section, that person is considered to have knowledge that the person is engaging in a significant new use and is required to follow the procedures in § 721.5(d).

§ 721.72 Hazard communication program.

Whenever a substance is identified in subpart E of this part as being subject to this section, a significant new use of that substance is any manner or method of manufacture, import, or processing associated with any use of that substance without establishing a hazard communication program as described in this section.

(a) *Written hazard communication program.* Each employer shall develop and implement a written hazard communication program for the substance in each workplace. The written program will, at a minimum, describe how the requirements of this section for labels, MSDSs, and other forms of warning material will be satisfied. The employer must make the written hazard communication program available, upon request, to all employees, contractor employees, and their designated representatives. The employer may rely on an existing hazard communication program, including an existing program established under the Occupational Health and Safety Administration (OSHA) Hazard Communication Standard (29 CFR 1900.1200) to comply with this paragraph provided that the existing hazard communication program satisfies the requirements of this paragraph. The written program shall include the following:

(1) A list of each substance identified in subpart E of this part as subject to this section known to be present in the work area. The list must be maintained in the work area and must use the identity provided on the appropriate MSDS for each substance required under paragraph (c) of this section. The list may be compiled for the workplace or for individual work areas.

(2) The methods the employer will use to inform employees of the hazards of non-routine tasks involving the substance, for example, the cleaning of reactor vessels, and the hazards associated with the substance contained in unlabeled pipes in their work area.

(3) The methods the employer will use to inform contractors of the presence of the substance in the employer's workplace and of the provisions of this part applicable to the substance if employees of the contractor work in the employer's workplace and are reasonably likely to be exposed to the substance while in the employer's workplace.

(b) *Labeling.* (1) Each employer shall ensure that each container of the substance in the workplace is labeled in accordance with this paragraph (b)(1).

(i) The label shall, at a minimum, contain the following information:

(A) A statement of health hazard(s) and precautionary measure(s) for the substance, if any, identified in subpart E of this part or by the employer.

(B) The identity by which the substance may be commonly recognized.

(C) A statement of environmental hazard(s) and precautionary measure(s) for the substance, if any, identified in subpart E of this part or by the employer.

(D) A statement of exposure and precautionary measure(s), if any, identified in subpart E of this part or by the employer.

(ii) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys information specified by paragraph (b)(1)(i) of this section. Any written materials must be readily accessible to the employees in their work areas throughout each work shift.

(iii) The employer need not label portable containers into which the substance is transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer.

(iv) The employer shall not remove or deface an existing label on incoming containers of the substance unless the container is immediately relabeled with the information specified in paragraph (b)(1)(i) of this section.

(2) Each employer shall ensure that each container of the substance leaving its workplace for distribution in commerce is labeled in accordance with this paragraph.

(i) The label shall, at a minimum, contain the following information:

(A) The information required under paragraph (b)(1)(i) of this section.

(B) The name and address of the manufacturer or a responsible party who can provide additional information on the substance for hazard evaluation and any appropriate emergency procedures.

(ii) The label shall not conflict with the requirements of the Hazardous Materials Transportation Act (18 U.S.C. 1801 et. seq.) and regulations issued under that Act by the Department of Transportation.

(3) The label, or alternative forms of warning, shall be legible and prominently displayed.

(4) The label, or alternative forms of warning, shall be in English; however, the information may be repeated in other languages.

(5) If the label or alternative form of warning is to be applied to a mixture containing a substance identified in subpart E of this part as subject to this section in combination with another substance identified in subpart E of this part and/or a substance defined as a "hazardous chemical" under the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1900.1200), the employer may prescribe on the label, MSDS, or alternative form of warning, the measures to control worker exposure or environmental release which the employer determines provide the greatest degree of protection. However, should these control measures differ from the applicable measures required under subpart E of this part, the employer must seek a determination of equivalency for such alternative control measures pursuant to § 721.30 before prescribing them under this paragraph.

(c) *Material safety data sheets.* (1) Each employer must obtain or develop a MSDS for the substance.

(2) Each MSDS shall contain, at a minimum, the following information:

(i) The identity used on the container label of the substance under this section, and, if not claimed confidential, the chemical and common name of the substance. If the chemical and common name are claimed confidential, a generic chemical name must be used.

(ii) Physical and chemical characteristics of the substance known to the employer (such as vapor pressure, flash point).

(iii) The physical hazards of the substance known to the employer, including the potential for fire, explosion, and reactivity.

(iv) The potential human and environmental hazards as specified in subpart E of this part for the substance.

(v) Signs and symptoms of exposure, and any medical conditions which are expected to be aggravated by exposure to the substance known to the employer.

(vi) The primary routes of exposure to the substance.

(vii) Precautionary measures to control worker exposure and/or environmental release identified in subpart E of this part for the substance, or alternative control measures which EPA has determined under § 721.30 provide substantially the same degree of protection as the identified control measures.

(viii) Any generally applicable precautions for safe handling and use of the substance which are known to the employer, including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for response to spills and leaks.

(ix) Any generally applicable control measures which are known to the employer, such as appropriate engineering controls, work practices, or personal protective equipment.

(x) Emergency first aid procedures known to the employer.

(xi) The date of preparation of the MSDS or of its last revision.

(xii) The name, address, and telephone number of the individual preparing or distributing the MSDS, or a responsible party who can provide additional information on the substance for hazard evaluation and any appropriate emergency procedures.

(3) If no relevant information is found or known for any given category on the MSDS, the employer must mark the MSDS to indicate that no applicable information was found.

(4) Where multiple mixtures containing the substance have similar compositions (i.e., the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture) and similar hazards, the employer may prepare one MSDS to apply to all of these multiple mixtures.

(5) If the employer becomes aware of any significant new information regarding the hazards of the substance or ways to protect against the hazards, this new information must be added to the MSDS within 3 months from the time the employer becomes aware of the new information. If the substance is not currently being manufactured, imported, processed, or used in the employer's workplace, the employer must add the new information to the MSDS before the substance is reintroduced into the workplace.

(6) The employer must ensure that persons receiving the substance from the employer are provided an appropriate MSDS with their initial shipment and with the first shipment after an MSDS is revised. The employer may either provide the MSDS with the shipped containers or send it to the person prior to or at the time of shipment.

(7) The employer must maintain a copy of the MSDS in its workplace, and must ensure that it is readily accessible during each work shift to employees when they are in their work areas.

(8) The MSDS may be kept in any form, including as operating procedures, and may be designed to cover groups of substances in a work area where it may be more appropriate to address the potential hazards of a process rather than individual substances. However, in all cases, the required information must be provided for each substance and must be readily accessible during each work shift to employees when they are in their work areas.

(9) The MSDS must be printed in English; however, the information may be repeated in other languages.

(d) *Employee information and training.* Each employer must ensure that employees are provided with information and training on the substance identified in subpart E of this part. This information and training must be provided at the time of each employee's initial assignment to a work area containing the substance and whenever the substance subject to this section is introduced into the employee's work area for the first time.

(1) Information provided to employees under this paragraph shall include:

(i) The requirements of this section.

(ii) Any operations in the work area where the substance is present.

(iii) The location and availability of the written hazard communication program required under paragraph (a) of this section, including the list of substances identified in subpart E of this part as subject to this section, and MSDSs required by paragraph (c) of this section.

(2) Training provided to employees shall include:

(i) Methods and observations that may be used to detect the presence or release of the substance in or from an employee's work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance, or odor of the substance when being released).

(ii) The potential human health and environmental hazards of the substance as specified in subpart E of this part.

(iii) The measures employees can take to protect themselves and the environment from the substance, including specific procedures the employer has implemented to protect employees and the environment from exposure to the substance, including appropriate work practices, emergency procedures, personal protective equipment, engineering controls, and other measures to control worker exposure and/or environmental release required under subpart E of the part, or alternative control measures which EPA has determined under § 721.30 provide substantially the same degree of protection as the specified control measures.

(iv) The requirements of the hazard communication program developed by the employer under this section, including an explanation of the labeling system and the MSDS required by this section and guidance on obtaining and using appropriate hazard information.

(e) *Low concentrations in mixtures.* If a substance identified in subpart E of this part is present in the work area only as a mixture, an employer is exempt from the provisions of this section if the concentration of the substance in the mixture does not exceed a concentration set in subpart E of this part. The exemption does not apply if the employer has reason to believe that during intended use or processing in the work area, the substance in the mixture may be concentrated above the level set in subpart E of this part.

(f) *Existing hazard communication program.* The employer need not take additional actions if existing programs and procedures satisfy the requirements of this section.

(g) *Human health, environmental hazard, exposure, and precautionary statements.* Whenever referenced in subpart E of this part for a substance, the following human health and environmental hazard, exposure, and precautionary statements shall appear on each label as specified in paragraph (b) of this section and the MSDS as specified in paragraph (c) of this section. Additional statements may be included as long as they are true and do not alter the meaning of the required statements.

(1) Human health hazard statements: This substance may cause:

(i) Skin irritation.

(ii) Respiratory complications.

(iii) Central nervous system effects.

(iv) Internal organ effects.

(v) Birth defects.

(vi) Reproductive effects.

(vii) Cancer.

(viii) Immune system effects.

(ix) Developmental effects.

(2) Human health hazard precautionary statements: When using this substance:

(i) Avoid skin contact.

(ii) Avoid breathing substance.

(iii) Avoid ingestion.

(iv) Use respiratory protection.

(v) Use skin protection.

(3) Environmental hazard statements: This substance may be:

(i) Toxic to fish.

(ii) Toxic to aquatic organisms.

(4) Environmental hazard precautionary statements: Notice to users:

(i) Disposal restrictions apply.

(ii) Spill clean-up restrictions apply.

(iii) Do not release to water.

(5) Each human health or environmental hazard precautionary statement identified in subpart E of this part for the label on the substance container must be followed by the statement, "See MSDS for details."

§ 721.80 Industrial, commercial, and consumer activities.

Whenever a substance is identified in subpart E of this part as being subject to this section, a significant new use of the substance is:

(a) Use in non-enclosed processes.

(b) Any manner or method of manufacture in non-enclosed processes associated with any use.

(c) Any manner or method of processing in non-enclosed processes associated with any use.

(d) Use beyond the site of manufacture or import.

(e) Processing beyond the site of manufacture or import.

(f) Any manner or method of manufacture (excluding import) of the substance associated with any use.

(g) Use other than as an intermediate.

(h) Use other than as a site-limited intermediate.

(i) Use as an intermediate where the concentration of the intermediate substance in the product intended for distribution in commerce exceeds the concentration specified in subpart E of this part for the substance.

(j) Use other than as described in the premanufacture notice referenced in subpart E of this part for the substance.

(k) Use other than allowed by the section 5(e) consent order referenced in subpart E of this part for the substance.

(l) Non-industrial use.

(m) Commercial use.

(n) Non-commercial use.

(o) Use in a consumer product.

(p) Aggregate manufacture and importation volume for any use greater than that specified in subpart E of this part for the substance.

(q) Aggregate manufacture and importation volume for any use greater than that allowed by the section 5(e) consent order referenced in subpart E of this part for the substance.

(r) Aggregate manufacture and importation volume for any use greater than that specified in subpart E of this part for the substance unless the manufacturer or importer has submitted the results of the health or environmental effects studies identified in subpart E of this part for the substance and those studies comply with the procedures and criteria for developing and evaluating data identified in subpart E of this part for the substance.

(s) Annual manufacture and importation volume for any use greater than that specified in subpart E of this part for the substance.

(t) Annual manufacture and importation volume for any use greater than that allowed by the section 5(e) consent order referenced in subpart E of this part for the substance.

(u) Annual manufacture and importation volume for any use greater than that specified in subpart E of this part for the substance unless the manufacturer or importer has submitted the results of the health or environmental effects studies identified in subpart E of this part for the substance and those studies comply with the procedures and criteria for developing and evaluating data identified in subpart E of this part for the substance.

(v) Use in the form of:

(1) A powder.

(2) A solid.

(3) A liquid.

(4) A gas.

(w) Any manner or method of manufacture of the substance in the following form associated with any use:

(1) A powder.

(2) A solid.

(3) A liquid.

(4) A gas.

(x) Any manner or method of processing of the substance in the following form associated with any use:

(1) A powder.

(2) A solid.

(3) A liquid.

(4) A gas.

(y) Use involving an application method that generates:

(1) A vapor, mist, or aerosol.

(2) A dust.

§ 721.85 Disposal.

Whenever a substance is identified in subpart E of this part as being subject to this section, a significant new use of the substance is any method of

(a) Disposal of the process stream associated with any use of the substance or with any manner or method of manufacturing associated with any use of the substance other than by the following. This provision does not supercede any applicable Federal, State or local laws and regulations.

(1) Incineration.

(2) Landfill.

(3) Deep well injection.

(b) Disposal of the process stream associated with any use or with any manner or method of processing associated with any use other than by the following. This provision does not supercede any applicable Federal, State, or local laws and regulations.

(1) Incineration.

(2) Landfill.

(3) Deep well injection.

(c) Disposal of the use stream associated with any use, other than by the following. This provision does not supercede any applicable Federal, State, or local laws and regulations.

(1) Incineration.

(2) Landfill.

(3) Deep well injection.

(d) Disposal of the substance associated with any use of the substance, or with any manner or method of manufacture or processing in association with any use. This provision does not supercede any applicable Federal, State, or local laws and regulations.

§ 721.90 Release to water.

Whenever a substance is identified in subpart E of this part as being subject to this section, a significant new use of the substance is:

(a) Any predictable or purposeful release of a manufacturing stream associated with any use of the substance, from any site:

(1) Into the waters of the United States.

(2) Into the waters of the United States without application of one or more of the following treatment technologies as specified in subpart E of this part either by the discharger or, in the case of a release through publicly-owned treatment works, by a combination of treatment by the discharger and the publicly-owned treatment works:

(i) Chemical precipitation and settling.

(ii) Biological treatment (activated sludge or equivalent) plus clarification.

(iii) Steam stripping.

(iv) Resin or activated carbon adsorption.

(v) Chemical destruction or conversion.

(vi) Primary wastewater treatment.

(3) Into the waters of the United States without primary wastewater treatment, and secondary wastewater treatment as defined in 40 CFR Part 133.

(4) Into the waters of the United States if the quotient from the following formula:

$$\frac{\text{number of kilograms/day/site released}}{\text{receiving stream flow (million liters/day)}} \times 1000 = \text{N parts per billion}$$

exceeds the level specified in subpart E of this part when calculated using the methods described in § 721.91. In lieu of calculating the above quotient, monitoring or alternative calculations may be used to predict the surface water concentration which will result from the intended release of the substance, if the monitoring procedures or calculations have been approved for such purpose by EPA. EPA will review and act on written requests to approve monitoring procedures or alternative calculations within 90 days after such requests are received. EPA will inform submitters of the disposition of such requests in writing, and will explain the reasons therefor when they are denied.

(b) Any predictable or purposeful release of a process stream containing the substance associated with any use of the substance from any site:

(1) Into the waters of the United States.

(2) Into the waters of the United States without application of one or more of the following treatment technologies as specified in subpart E of this part either by the discharger or, in the case of a release through publicly-owned treatment works, by a combination of treatment by the discharger and the publicly-owned treatment works:

(i) Chemical precipitation and settling.

(ii) Biological treatment (activated sludge or equivalent) plus clarification.

(iii) Steam stripping.

(iv) Resin or activated carbon adsorption.

(v) Chemical destruction or conversion.

(vi) Primary wastewater treatment.

(3) Into the waters of the United States without primary wastewater treatment, and secondary wastewater treatment as defined in 40 CFR Part 133.

(4) Into the waters of the United States if the quotient from the following formula:

$$\frac{\text{number of kilograms/day/site released}}{\text{receiving stream flow (million liters/day)}} \times 1000 = N \text{ parts per billion}$$

exceeds the level specified in subpart E of this part when calculated using the methods described in § 721.91. In lieu of calculating the above quotient, monitoring or alternative calculations may be used to predict the surface water concentration which will result from the intended release of the substance, if the monitoring procedures or calculations have been approved for such purpose by EPA. EPA will review and act on written requests to approve monitoring procedures or alternative calculations within 90 days after such requests are received. EPA will inform submitters of the disposition of such requests in writing, and will explain the reasons therefor when they are denied.

(c) Any predictable or purposeful release of a use stream containing the substance associated with any use of the substance from any site:

(1) Into the waters of the United States.

(2) Into the waters of the United States without application of one or more of the following treatment technologies as specified in subpart E of this part either by the discharger or, in the case of a release through publicly-owned treatment works, by a combination of treatment by the discharger and the publicly-owned treatm works:

(i) Chemical precipitation and s tling.

(ii) Biological treatment (activate sludge or equivalent) plus clarific tion.

(iii) Steam stripping.

(iv) Resin or activated carbon a sorption.

(v) Chemical destruction or conve sion.

(vi) Primary wastewater treatment

(3) Into the waters of the Unite States without primary wastewate treatment, and secondary wastewate treatment as defined in 40 CFR Pa 133.

(4) Into the waters of the Unite States if the quotient from:

$$\frac{\text{number of kilograms/day/site released}}{\text{receiving stream flow (million liters/day)}} \times 1000 = N \text{ parts per billion}$$

exceeds the level specified in subpar E of this part, when calculated usin the methods described in § 721.91. I lieu of calculating the above quotien however, monitoring or alternativ calculations may be used to predic the surface water concentration e pected to result from intended releas of the substance, if the monitorin procedures or calculations have bee approved for such purpose by EPA EPA will review and act on written re quests to approve monitoring proce dures or alternative calculation within 90 days after such requests ar received. EPA will inform submitter of the disposition of such requests i writing, and will explain the reason therefor when they are denied.

§ 721.91 Computation of estimated surfac water concentrations: instructions.

These instructions describe the us of the equation specified i § 721.90(a)(4) and (b)(4) to compute es timated surface water concentratio which will result from release of a su stance identified in subpart E of thi part. The equation shall be compute for each site using the stream flo rate appropriate for the site according to paragraph (b) of this section, and the highest number of kilograms calculated to be released for that site on a given day according to paragraph (a) of this section. Two variables shall be considered in computing the equation, the number of kilograms released, and receiving stream flow.

(a) *Number of kilograms released.* (1) To calculate the number of kilograms of substance to be released from manufacturing, processing, or use operations, as specified in the numerator of the equation, develop a process description diagram which describes each manufacturing, processing, or use operation involving the substance. The process description must include the major unit operation steps and chemical conversions. A unit operation is a functional step in a manufacturing, processing, or use operation where substances undergo chemical changes and/or changes in location, temperature, pressure, physical state, or similar characteristics. Include steps in which the substance is formulated into mixtures, suspensions, solutions, etc.

(2) Indicate on each diagram the entry point of all feedstocks (e.g., reactants, solvents, and catalysts) used in the operation. Identify each feedstock and specify its approximate weight regardless of whether the process is continuous or batch.

(3) Identify all release points from which the substance or wastes containing the substance will be released into air, land, or water. Indicate these release points on the diagram. Do not include accidental releases or fugitive emissions.

(4) For releases identified in the diagram that are destined for water, estimate the amount of substance that will be released before the substance enters control technology. The kilograms of substance released may be estimated based on:

(i) The mass balance of the operation, i.e., totaling inputs and outputs, including wastes for each part of the process such that outputs equal inputs. The amount released to water may be the difference between the amount of the substance in the starting material (or formed in a reaction) minus the amount of waste material removed from each part of the process and not released to water and the amount of the substance in the final product.

(ii) Physical properties such as water solubility where a known volume of water being discharged is assumed to contain the substance at concentrations equal to its solubility in water. This approach is particularly useful where the waste stream results from separation of organic/water phases or filtration of the substance from an aqueous stream to be discharged.

(iii) Measurements of flow rates of the process/use stream and known concentrations of the substance in the stream.

(5) After releases of a substance to water are estimated for each operation on a site, total the releases of the substance to water from all operations at that site. The value (number of kilograms) specified in the numerator of the equation should reflect total kilograms of substance released to water per day from all operations at a single site.

(6) Use the highest expected daily release of the substance for each site.

(b) *Receiving stream flow.* (1) The receiving stream flow shall be expressed in million liters per day (MLD). The flow rate data to be used must be for the point of release on the water body that first receives release of the substance whether by direct discharge from a site, or by indirect discharge through a Publicly-Owned Treatment Works (POTW) for each site. The flow rate reported shall be the lowest 7-day average stream flow with a recurrence interval of 10 years (7-Q- 10). If the 7-Q-10 flow rate is not available for the actual point of release, the stream flow rate should be used from the U.S. Geological Survey (USGS) gauging station that is nearest the point of release that is expected to have a flow rate less than or equal to the receiving stream flow at the point of release.

(2) Receiving stream flow data may be available from the National Pollutant Discharge Elimination System (NPDES) permit for the site or the POTW releasing the substance to surface water, from the NPDES permit-

writing authority for the site or the POTW, or from USGS publications, such as the water-data report series.

(3) If receiving stream flow data are not available for a stream, either the value of 10 MLD or the daily flow of wastewater from the site or the POTW releasing the substance must be used as an assumed minimum stream flow. Similarly, if stream flow data are not available because the location of the point of release of the substance to surface water is a lake, estuary, bay, or ocean, then the flow rate to be used must be the daily flow of wastewater from the site or the POTW releasing the substance to surface water. Wastewater flow data may be available from the NPDES permit or NPDES authority for the site or the POTW releasing the substance to water.

Subpart C—Recordkeeping Requirements

§ 721.100 Applicability.

This subpart C identifies certain additional recordkeeping requirements applicable to manufacturers, importers, and processors of substances identified in subpart E of this part for each specific substance. The provisions of this subpart C apply only when referenced in subpart E of this part for a substance and significant new use identified in that subpart E. If the provisions in this subpart C conflict with general provisions of subpart A of this part, the provisions of this subpart C shall apply.

[54 FR 31313, July 27, 1989]

§ 721.125 Recordkeeping requirements.

At the time EPA adds a substance to subpart E of this part, EPA will specify appropriate recordkeeping requirements which correspond to the significant new use designations for the substance selected from subpart B of this part. Each manufacturer, importer, and processor of the substance shall maintain the records for 5 years from the date of their creation. In addition to the records specified in § 721.40, the records whose maintenance this section requires may include the following:

(a) Records documenting the manufacture and importation volume of the substance and the corresponding dates of manufacture and import.

(b) Records documenting volumes of the substance purchased in the United States by processors of the substance, names and addresses of suppliers, and corresponding dates of purchase.

(c) Records documenting the names and addresses (including shipment destination address, if different) of all persons outside the site of manufacture, importation, or processing to whom the manufacturer, importer, or processor directly sells or transfers the substance, the date of each sale or transfer, and the quantity of the substance sold or transferred on such date.

(d) Records documenting establishment and implementation of a program for the use of any applicable personal protective equipment required under § 721.63.

(e) Records documenting the determinations required by § 721.63(a)(3) that chemical protective clothing is impervious to the substance.

(f) Records documenting establishment and implementation of the hazard communication program required under § 721.72.

(g) Copies of labels required under § 721.72(b).

(h) Copies of material safety data sheets required under § 721.72(c).

(i) Records documenting compliance with any applicable industrial, commercial, and consumer use limitations under § 721.80.

(j) Records documenting compliance with any applicable disposal requirements under § 721.85, including the method of disposal, location of disposal sites, dates of disposal, and volume of the substance disposed. Where the estimated disposal volume is not known to or reasonably ascertainable by the manufacturer, importer, or processor, that person must maintain other records which demonstrate establishment and implementation of a program that ensures compliance with any applicable disposal requirements.

(k) Records documenting establishment and implementation of procedures that ensure compliance with any applicable water discharge limitations under § 721.90.

[54 FR 31313, July 27, 1989]

Subpart D—Expedited Process for Issuing Significant New Use Rules for Selected Chemical Substances and Limitation or Revocation of Selected Significant New Use Rules

SOURCE: 54 FR 31314, July 27, 1989, unless otherwise noted.

§ 721.160 Notification requirements for new chemical substances subject to section 5(e) orders.

(a) *Selection of substances.* (1) In accordance with the expedited process specified in this section, EPA will issue significant new use notification requirements and other specific requirements for each new chemical substance that is the subject of a final order issued under section 5(e) of the Act, except for an order that prohibits manufacture and import of the substance, unless EPA determines that significant new use notification requirements are not needed for the substance.

(2) If EPA determines that significant new use notification requirements are not needed for a substance that is subject to a final order issued under section 5(e) of the Act, except for an order that prohibits manufacture or import of the substance, EPA will issue a notice in the FEDERAL REGISTER explaining why the significant new use requirements are not needed.

(b) *Designation of requirements.* (1) The significant new use notification and other specific requirements will be based on and be consistent with the provisions included in the final order issued for the substance under section 5(e) of the Act. EPA may also designate additional activities as significant new uses which will be subject to notification. Designation of additional activities as significant new uses will be done in accordance with the criteria and procedures under § 721.170, or through a separate rulemaking proceeding.

(2) Significant new use requirements and other specific requirements designated under this section will be listed in subpart E of this part. For each substance, subpart E will identify:

(i) The chemical name.

(ii) The activities designated as significant new uses.

(iii) Other specific requirements applicable to the substance, including recordkeeping requirements or any other requirements included in the final section 5(e) order.

(c) *Procedures for issuing significant new use rules.* (1) EPA will issue significant new use rules under this section by one of the following three processes: direct final rulemaking, interim final rulemaking, or notice and comment rulemaking. EPA will use the direct final rulemaking process to issue significant new use rules unless it determines that, in a particular case, one of the other processes is more appropriate.

(2) FEDERAL REGISTER documents issued to propose or establish significant new uses under this section will contain the following:

(i) The chemical identity of the substance or, if its specific identity is claimed confidential, an appropriate generic chemical name and an accession number assigned by EPA.

(ii) The premanufacture notice number.

(iii) The CAS number, where available and not claimed confidential.

(iv) A summary of EPA's findings under section 5(e)(1)(A) of the Act for the final order issued under section 5(e).

(v) Designation of the significant new uses subject to, or proposed to be subject to, notification and any other applicable requirements.

(vi) Any modifications of subpart A of this part applicable to the specific substance and significant new uses.

(vii) If the FEDERAL REGISTER document establishes a final rule, or notifies the public that a final rule will not be issued after public comment has been received, the document will describe comments received and EPA's response.

(3) *Direct final rulemaking.* (i) When EPA uses the direct final rulemaking procedure to issue a significant new use rule, it will issue a final rule in the FEDERAL REGISTER following

its decision to develop a significant new use rule under this section for a specific new chemical substance.

(ii) The FEDERAL REGISTER document will state that, unless written notice is received by EPA within 30 days of publication that someone wishes to submit adverse or critical comments, the rule will be effective 60 days from the date of publication. The written notice of intent to submit adverse or critical comments should state which SNUR(s) will be the subject of the adverse or critical comments, if several SNURs are established through the direct final rule. If notice is received within 30 days that someone wishes to submit adverse or critical comments, the section(s) of the direct final rule containing the SNUR(s) for which a notice of intent to comment was received will be withdrawn by EPA issuing a document in the final rule section of the FEDERAL REGISTER, and a proposal will be published in the proposed rule section of the FEDERAL REGISTER. The proposal will establish a 30-day comment period.

(iii) If EPA, having considered any timely comments submitted in response to the proposal, decides to establish notification requirements under this section, EPA will issue a final rule adding the substance to subpart E of this part and designating the significant new uses subject to notification.

(4) *Notice and comment rulemaking.* (i) When EPA uses a notice and comment procedure to issue a significant new use rule, EPA will issue a proposal in the FEDERAL REGISTER following its decision to develop a significant new use rule under this section for a specific new chemical substance. Persons will be given 30 days to comment on whether EPA should establish notification requirements for the substance under this part.

(ii) If EPA, having considered any timely comments, decides to establish notification requirements under this section, EPA will issue a final rule adding the substance to subpart E of this part and designating the significant new uses subject to notification.

(5) *Interim final rulemaking.* (i) When EPA uses the interim final rulemaking procedure to issue a significant new use rule, EPA will issue interim final rule in the final rule se tion of the FEDERAL REGISTER followi its decision to develop a significa new use rule for a specific new chem cal substance. The document will sta EPA's reasons for using the interi final rulemaking procedure.

(A) The significant new use rule wi take effect on the date of publicatio

(B) Persons will be given 30 da from the date of publication to subm comments.

(ii) Interim final rules issued unde this section shall cease to be in effe 180 days after publication unles within the 180-day period, EPA issu a final rule in the FEDERAL REGIST responding to any written commen received during the 30-day commen period specified in paragrap (c)(5)(i)(B) of this section and promu gating final significant new use noti cation requirements and other requir ments for the substance.

(d) *Schedule for issuing significa new use rules.* (1) Unless EPA dete mines that a significant new use ru should not be issued under this se tion, EPA will issue a proposed rule, direct final rule, or an interim fina rule within 180 days of receipt of valid notice of commencement unde § 720.102 of this chapter for any su stance for which the notice of com mencement was received on or afte October 10, 1989.

(2) Unless EPA determines that significant new use rule should not b issued under this section, EPA wi issue a proposed rule, a direct fin rule, or an interim final rule within year of October 10, 1989, for any sub stance for which the valid notice o commencement under § 720.102 of thi chapter was received before Octobe 10, 1989.

(3) If EPA receives adverse or criti cal significant comments followin publication of a proposed or interi final rule, EPA will either withdra the rule or issue a final rule addres ing the comments received.

**.170 Notification requirements for se-
lected new chemical substances that
have completed premanufacture
review.**

) *Selection of substances.* In ac-
lance with the expedited process
eified in this section, EPA may
e significant new use notification
recordkeeping requirements for
new chemical substance for which
emanufacture notice has been sub-
ed under Part 720 of this chapter
PA determines that activities other
n those described in the premanu-
ure notice may result in significant
nges in human exposure or envi-
nental release levels and/or that
cern exists about the substance's
lth or environmental effects.

) *Concern criteria.* EPA may deter-
e that concern exists about a sub-
ce's health or environmental ef-
s if EPA makes any one of the fol-
ng findings:

)(i) The substance may cause carci-
enic effects because the substance:

) Has been shown by valid test
to cause carcinogenic effects in
nans or in at least one species of
ratory animal.

) Has been shown to be a possible
inogen based on the weight of the
ence in short-term tests indicative
he potential to cause carcinogenic
cts.

) Is closely analogous, based on
cologically relevant similarities in
ecular structure and physical prop-
es, to another substance that has
n shown by test data to cause carci-
enic effects in humans or in at
t one species of laboratory animal,
vided that if there is more than
such analogue, the greatest weight
be given to the relevant data for
most appropriate analogues.

)) Is known or can reasonably be
cipated, based on valid scientific
or established scientific princi-
, to be metabolized in humans or
sformed in the environment to a
stance which may have the poten-
to cause carcinogenic effects under
criteria in paragraphs (b) (1)(i)(A),
or (C) of this section.

) No substance may be regulated
ed on a finding under paragraph
1) of this section unless EPA has
also made the finding under § 721.170(c)(2)(ii).

(2) The substance has been shown by valid test data to cause acutely toxic effects in at least one species of laboratory animal or is closely analogous, based on toxicologically relevant similarities in molecular structure and physical properties, to another substance that has been shown by valid test data to cause acutely toxic effects in at least one species of laboratory animal, provided that if there is more than one such analogue, the greatest weight will be given to the relevant data for the most appropriate analogues.

(3) The substance may cause serious chronic effects, serious acute effects, or developmentally toxic effects under reasonably anticipated conditions of exposure because the substance:

(i) Has been shown by valid test data to cause serious chronic effects, serious acute effects, or developmentally toxic effects in humans or in at least one species of laboratory animal at dose levels that could be of concern under reasonably anticipated conditions of exposure.

(ii) Is closely analogous, based on toxicologically relevant similarities in molecular structure and physical properties, to another chemical substance that has been shown by valid test data to cause serious chronic effects, serious acute effects, or developmentally toxic effects in humans or in at least one species of laboratory animal at dose levels that could be of concern under reasonably anticipated conditions of exposure, provided that if there is more than one such analogue, the greatest weight will be given to the relevant data for the most appropriate analogues.

(iii) Is known or can reasonably be anticipated, based on valid scientific data or established scientific principles, to be metabolized in humans or transformed in the environment to a substance which may have the potential to cause serious chronic effects, serious acute effects, or developmentally toxic effects under the criteria in paragraph (b) (3)(i) and (ii) of this section.

(iv) Has been shown to potentially cause developmentally toxic effects based on the weight of the evidence in short-term tests indicative of the potential to cause developmentally toxic effects.

(4) The substance may cause significant adverse environmental effects under reasonably anticipated conditions of release because the substance:

(i) Has been shown by valid test data to cause significant adverse environmental effects at dose levels that could be of concern under reasonably anticipated conditions of release.

(ii) Is closely analogous, based on toxicologically relevant similarities in molecular structure and physical properties, to another substance that has been shown by valid test data to cause significant adverse environmental effects at dose levels that could be of concern under reasonably anticipated conditions of release, provided that if there is more than one such analogue, the greatest weight will be given to the relevant data for the most appropriate analogues.

(iii) Has been determined, based on calculations using the substance's physical and chemical properties, to be potentially able to cause significant adverse environmental effects at dose levels that could be of concern under reasonably anticipated conditions of release.

(iv) Is known or can reasonably be anticipated, based on valid scientific data or established scientific principles, to be environmentally transformed to a substance which may have the potential to cause significant adverse environmental effects under the criteria in paragraph (b) (4)(i), (ii), and (iii) of this section.

(5) Concern exists about the health or environmental effects of one or more impurities or byproducts of the substance because the impurity or byproduct meets one or more of the criteria in paragraph (b) (1) through (4) of this section and either:

(i) The impurity or byproduct is a new chemical substance and may be present in concentrations that could cause adverse health or environmental effects under reasonably anticipated conditions of exposure or release.

(ii) Reasonably anticipated manufacture, processing, or use activities involving the substance for which a premanufacture notice has been submitted may result in significantly
creased human exposure to or envir
mental release of the impurity or b
product compared to exposure or r
lease levels resulting from existing a
tivities involving the impurity or b
product.

(c) *Designation of requirements.* (
When EPA decides to establish signi
cant new use reporting requiremen
under this section, it may designate
a significant new use one or more
the industrial, commercial, or co
sumer activities specified und
§ 721.80 (a) through (i), (l) throu
(o), and (v) through (y); environme
tal release activities specified und
§ 721.85 or § 721.90; or subcategories
these activities. In addition, EPA m
designate specific requirements d
scribed under subpart C of this pa
that are applicable to the substance.

(2) EPA may designate as a signi
cant new use only those activities th
(i) are different from those describ
in the premanufacture notice for th
substance, including any amendmen
deletions, and additions of activities
the premanufacture notice, and (
may be accompanied by changes in e
posure or release levels that are signi
icant in relation to the health or env
ronmental concerns identified und
paragraph (b) of this section.

(d) *Procedures for issuing signi
cant new use rules.* (1) Significant ne
use requirements designated und
this section will be listed in subpart
of this part. For each substance, su
part E of this part will identify:

(i) The chemical name.

(ii) The activities designated as s
nificant new uses, which may inclu
one or more of the activities describ
in paragraph (c) of this section.

(iii) Other specific requirements a
plicable to the substance.

(2) When EPA determines that
substance is a candidate for a signi
cant new use rule under this section
will notify the person that submitt
the premanufacture notice for th
substance no later than 7 calend
days before the expiration of th
notice review period under § 720.75
this chapter. In providing this notic
EPA will describe the health or env
ronmental concerns identified und
paragraph (b) of this section and th

ivities under consideration for des- ation as significant new uses. Such ice may be by telephone, but in s event will be confirmed in writing later than 30 days after completion he notice review period.

3) FEDERAL REGISTER documents ied to propose or establish signifi- t new uses under this section will tain the following:

) The chemical identity of the sub- nce or, if its specific identity is imed confidential, an appropriate eric chemical name and an acces- n number assigned by EPA.

i) The premanufacture notice nber.

ii) The CAS number, where avail- e and not claimed confidential.

v) A summary of the basis for ion under this section.

) Designation of the significant uses subject to, or proposed to be ject to, notification and any other licable requirements.

i) Any modifications of subpart A this part applicable to the specific stance and significant new uses.

ii) If the FEDERAL REGISTER docu- nt establishes a final rule, or noti- the public that a final rule will be issued after public comment been received, the document will cribe comments received and EPA's ponse.

) EPA will issue significant new rules under this section by one of following three processes: direct al rulemaking, interim final rule- king, or notice and comment rule- king. EPA will use the direct final emaking process to issue significant use rules unless it determines t, in a particular case, one of the er processes is more appropriate.

)(A) When EPA uses the direct al rulemaking procedure to issue a nificant new use rule it will issue a ect final rule in the final rule sec- n of the FEDERAL REGISTER following decision to develop a significant use rule under this section for a cific new chemical substance.

B) The FEDERAL REGISTER document l state that, unless written notice is eived by EPA within 30 days after date of publication that someone hes to submit adverse or critical nments, the SNUR will be effective 60 days from date of publication. The written notice of intent to submit adverse or critical comments should state which SNUR(s) will be the subject of the adverse or critical comments, if several SNURs are established through the direct final rule. If notice is received within 30 days after the date of publication that someone wishes to submit adverse or critical comments, the section(s) of the direct final rule containing the SNUR(s) for which a notice of intent to comment was received will be withdrawn by EPA issuing a document in the final rule section of the FEDERAL REGISTER, and EPA will issue a proposed rule in the proposed rule section of the FEDERAL REGISTER. The proposed rule will establish a 30-day comment period.

(C) If EPA, having considered any timely comments submitted in response to the proposal, decides to establish notification requirements under this section, EPA will issue a final rule adding the substance to subpart E of this part and designating the significant new uses subject to notification.

(ii)(A) When EPA uses a notice and comment procedure to issue a significant new use rule, EPA will issue a proposed rule in the FEDERAL REGISTER following its decision to develop a significant new use rule under this section for a specific new chemical substance. Persons will be given 30 days to comment on whether EPA should establish notification requirements for the substance under this part.

(B) If EPA, having considered any timely comments, decides to establish notification requirements under this section, EPA will issue a final rule adding the substance to subpart E of this part and designating the significant new uses subject to notification.

(iii)(A) When EPA uses the interim final rulemaking procedure to issue a significant new use rule, EPA will issue an interim final rule in the final rule section of the FEDERAL REGISTER following its decision to develop a significant new use rule for a specific new chemical substance. The document will state EPA's reasons for using the interim final rulemaking procedure.

(*1*) The significant new use rule will take effect on the date of publication.

(*2*) Persons will be given 30 days from the date of publication to submit comments.

(B) An interim final rule issued under this section shall cease to be in effect 180 days after publication unless, within the 180-day period, EPA issues a final rule in the FEDERAL REGISTER responding to any written comments received during the 30-day comment period specified in paragraph (d)(4)(iii)(A)(*2*) of this section and promulgating final significant new use notification requirements and other requirements for the substance.

(e) *Schedule for issuing significant new use rules.* (1) EPA will issue a proposed rule, an interim final rule, or a direct final rule within 270 days of receipt of the notice of commencement under § 720.102 of this chapter for any substance for which the notice of commencement was received on or after October 10, 1989.

(2) If EPA receives adverse or critical comments within the designated comment period following publication of a proposed rule or an interim final rule, EPA will either withdraw the rule or issue a final rule addressing the comments received.

§ 721.185 Limitation or revocation of certain notification requirements.

(a) *Criteria for modification or revocation.* EPA may at any time modify or revoke significant new use notification requirements for a chemical substance which has been added to subpart E of this part using the procedures under § 721.160 or § 721.170. Such action may be taken under this section if EPA makes one of the following determinations, unless other information shows that the requirements should be retained:

(1) Test data or other information obtained by EPA provide a reasonable basis for concluding that activities designated as significant new uses of the substance will not present an unreasonable risk of injury to human health or the environment.

(2) EPA has promulgated a rule under section 4 or 6 of the Act, or EPA or another agency has taken action under another law for the substance that eliminates the need for significant new use notification under section 5(a)(2) of the Act.

(3) EPA has received significant new use notices for some or all of the activities designated as significant new uses of the substance and, after reviewing such notices, concluded that there is no need to require additional notice from persons who propose to engage in identical or similar activities.

(4) EPA has examined new information, or has reexamined the test data or other information or analysis supporting its decision to add the substance to subpart E of this part under § 721.170 and has concluded that the substance does not meet the criteria under § 721.170(b).

(5) For a substance added to subpart E of this part under § 721.160, EPA has examined new information, or has reexamined the test data or other information or analysis supporting its finding under section 5(e)(1)(A)(ii)(I) of the Act, and has concluded that a rational basis no longer exists for the findings that activities involving the substance may present an unreasonable risk of injury to human health or the environment required under section 5(e)(1)(A) of the Act.

(6) For a substance added to subpart E of this part under § 721.160, certain activities involving the substance have been designated as significant new uses pending the completion of testing, and adequate test data developed in accordance with applicable procedures and criteria have been submitted to EPA.

(b) *Procedures for limitation or revocation.* Modification or revocation of significant new use notification requirements for a substance that has been added to subpart E of this part using the procedures described under § 721.160 or § 721.170 may occur either at EPA's initiative or in response to a written request.

(1) Any affected person may request modification or revocation of significant new use notification requirements for a substance that has been added to subpart E of this part using the procedures described in § 721.160 or § 721.170 by writing to the Director of the Office of Toxic Substances and stating the basis for such request. All

requests should be sent to the TSCA Document Processing Center (TS-790), Room L-100, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. ATTN: Request to amend significant new use rule. The request must be accompanied by information sufficient to support the request.

(2) The Director of the Office of Toxic Substances will consider the request, make a determination whether to initiate rulemaking to modify the requirements, and notify the requester of that determination by certified letter. If the request is denied, the letter will explain why EPA has concluded that the significant new use notification requirements for that substance should remain in effect.

(3) If EPA concludes that significant new use notification requirements for a substance should be limited or revoked, EPA will propose the changes in the FEDERAL REGISTER, briefly describe the grounds for the action, and provide interested parties an opportunity to comment.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

Subpart E—Significant New Uses for Specific Chemical Substances

§ 721.266 Adipic acid, polymer with 1,4-cyclohexane-dimethanol, dipropylene glycol, alkanepolyol, substituted alkanolamines, and carbomonocyclic dicarboxylic acid (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as adipic acid, polymer with 1,4 -cyclohexanedimethanol, dipropylene glycol, alkanepolyol, substituted alkanolamines, and carbomonocyclic dicarboxylic acid (PMN P-89-653) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Uses as specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance: recordkeeping requirements specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 17381, Apr. 24, 1990]

§ 721.288 Alkanepolyol phosphate ester (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as alkanepolyol phosphate ester (P-89-448) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Uses as specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance: Recordkeeping requirements specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 17381, Apr. 24, 1990]

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§ 721.291 Monosubstituted alkoxyaminotrazines (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substance monosubstituted alkoxyaminotrazines (PMN P-86-1043) is subject to reporting under this section for the significant new uses described in paragraph (a)(1)(i) of this section.

(i) The significant new uses are:

(A) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1) and (a)(3), (b) [concentration set at 0.1 percent], and (c).

(B) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(iv), (g)(1)(vii), and (g)(1)(viii), (g)(2)(i) and (g)(2)(v), (g)(4)(xi), and (g)(5). The provisions of § 721.72(d) requiring employees to be provided with information on the location and availability of a written hazard communication program and MSDSs do not apply when the written program and MSDS are not required under § 721.72(a) and (c), respectively. The provision of § 721.72(g) requiring placement of specific information on a MSDS does not apply when a MSDS in not required under § 721.72(c).

(C) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(D) *Disposal.* Requirements as specified in § 721.85(a)(1) and (a)(2) and (b)(1) and (b)(2).

(E) *Release to water.* Requirements as specified in § 721.90(a)(4) [concern level of 10 ppb], (b)(4) [concern level of 10 ppb], and (c)(4)[concern level of 10 ppb].

(ii) [Reserved]

(2) The chemical substance monosubstituted alkoxyaminotrazines (PMN P-86-1044) is subject to reporting under this section for the significant new uses described in paragraph (a)(2)(i) of this section.

(i) The significant new uses are:

(A) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iii) through (a)(5)(vii), and (a)(6)(i), (b) [concentration set at 0.1 percent], and (c).

(B) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(iv), (g)(1)(vii), and (g)(1)(viii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), and (g)(2)(v), (g)(4)(xi), and (5). The provisions of § 721.72(d) requiring employees to be provided with information on the location and availability of a written hazard communication program and MSDSs do not apply when the written program and MSDS are not required under § 721.72(a) and (c), respectively. The provision of § 721.72(g) requiring placement of specific information on a MSDS does not apply when a MSDS in not required under § 721.72(c).

(C) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(D) *Disposal.* Requirements as specified in § 721.85 (a)(1) and (a)(2) and (b)(1) and (b)(2).

(E) *Release to water.* Requirements as specified in § 721.90(a)(4) [concern level of 1 ppb], (b)(4)[concern level of 1 ppb], and (c)(4)[concern level of 1 ppb].

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Managemen and Budget under OMB control numbe 2070-0012)

[55 FR 26108, June 26, 1990]

Effective Date Note: At 55 FR 2610 June 26, 1990, § 721.291 was added, effectiv August 27, 1990.

1.295 Reaction products of secondary
alkyl amines with a substituted benzen-
esulfonic acid and sulfuric acid (gener-
ic name).

) *Chemical substances and signifi-*
t new uses subject to reporting. (1)
e chemical substances identified ge-
ically as reaction products of sec-
lary alkyl amines with a substituted
zenesulfonic acid and sulfuric acid
INs P-89-703, P-89-755, and P-89-
) are subject to reporting under
section for significant new uses
cribed in paragraph (a)(2) of this
ion.

) The significant new uses are:

) *Industrial, commercial, and con-*
ier activities. Uses as specified in
1.80(q).

) [Reserved]

) *Specific requirements.* The provi-
s of subpart A of this part apply to
section except as modified by this
agraph.

) *Recordkeeping.* The following
rdkeeping requirements are appli-
le to manufacturers, importers, and
cessors of these substances: Rec-
keeping requirements specified in
1.125(a), (b), (c), and (i).

) *Limitations or revocation of cer-*
notification requirements. The
visions of § 721.185 apply to this
ion.

) *Determining whether a specific*
is subject to this section. The pro-
ons of § 721.575(b)(1) apply to this
ion.

proved by the Office of Management
Budget under OMB control number
-0012)

FR 17381, Apr. 24, 1990]

1.296 Alkylphenoxypolyalkoxyamine
(generic name).

) *Chemical substances and signifi-*
t new uses subject to reporting. (1)
e chemical substance identified ge-
ically as akylphenoxypolyalkoxya-
e (PMN P-86-1489) is subject to re-
ting under this section for the sig-
cant new uses described in para-
ph (a)(2) of this section.

) The significant new uses are:

) *Hazard communication program.*
uirements as specified in
1.72(b)(2), (c), (f), and (g)(3)(ii),
4)(iii), and (g)(5).

(ii) *Release to water.* Section 721.90(a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(f), (g), (h), and (k).

(2) *Limitations or revocation of certain requirements.* The provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26097, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26097, June 26, 1990, § 721.296 was added, effective August 27, 1990.

§ 721.350 11-Aminoundecanoic acid.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance 11-aminoundecanoic acid, CAS Number 2432-99-7, is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is any use other than as.

(i) An intermediate in the manufacture of polymers in an enclosed process when it is expected that the 11-aminoundecanoic acid will be fully polymerized during the manufacturing process, or

(ii) A component in photoprocessing solutions.

(b) *Specific requirements.* The provisions of Subpart A of this part apply to this section except as modified by this paragraph.

(1) *Definitions.* In addition to the definitions in § 721.3, the following definitions apply to this section:

(i) "Enclosed process" means a process that is designed and operated so that there is no intentional release of any substance present in the process. A process with fugitive, inadvertent, or emergency pressure relief releases remains an enclosed process so long as measures are taken to prevent worker exposure to and environmental contamination from the releases.

(ii) "Internal subunit" means a subunit that is covalently linked to at least two other subunits. "Internal subunits" of polymer molecules are chemically derived from monomer molecules that have formed covalent links between two or more other molecules.

(iii) "Monomer" means a chemical substance that has the capacity to form links between two or more other molecules.

(iv) "Polymer" means a chemical substance that consists of at least a simple weight majority of polymer molecules but consists of less than a simple weight majority of molecules with the same molecular weight. Collectively, such polymer molecules must be distributed over a range of molecular weights wherein differences in molecular weight are primarily attributable to differences in the number of internal subunits.

(v) "Polymer molecule" means a molecule which includes at least four covalently linked subunits, at least two of which are internal subunits.

(vi) "Subunit" means an atom or group of associated atoms chemically derived from corresponding reactants.

(2) [Reserved]

[52 FR 19865, May 28, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.400 Disubstituted diamino anisole.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance referred to by its premanufacture notice number and generic chemical name is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: P-83-822, disubstituted diamino anisole.

(2) The significant new uses are:

(i) Use other than as an intermediate.

(ii) Manufacture, import, or processing for use as an intermediate without establishing a program whereby:

(A) Persons employed by or under the control of the manufacturer, importer, or processor who may be exposed to the substance (including those persons involved in maintenance, packaging, and storage operations) wear protective gloves deter mined to be impervious to the sub stance by testing the gloves under th conditions of exposure or by evaluat ing the specifications provided by th manufacturer of the gloves, and

(B) Packages containing the sub stance (including those storing the substance between manufacturing or importing and processing stages) are labeled to indicate that the substance should be handled only while using gloves determined to be impervious to the substance.

(b) *Specific requirements.* The provisions of subpart A of this Part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* In addition to the requirements of § 721.17, manufacturers, importers, and processors of the chemical substance identified in paragraph (a)(1) of this section must maintain the following records for 5 years from their creation:

(i) The results of any determinatio that gloves are impervious.

(ii) The names of persons required to wear gloves.

(iii) Copies of labels described in paragraph (a)(2)(ii)(B) of this sectio

(2) [Reserved]

(Approved by the Office of Manageme and Budget under OMB control numbe 2070-0012)

[50 FR 34465, Aug. 26, 1985. Redesignate at 53 FR 2845, Feb. 2, 1988]

§ 721.445 Sodium salt of an alkylated, su fonated aromatic (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1 The chemical substance identified generically as a sodium salt of an alkylated, sulfonated aromatic (PMN P-84-591) is subject to reporting unde this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(j) (use as a dye leveler) and (q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to his section except as modified by this aragraph.

(1) *Recordkeeping.* The following ecordkeeping requirements are appli- able to manufacturers, importers, and rocessors of this substance, as speci- ed in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of cer- ain notification requirments.* The rovisions of § 721.185 apply to this ection.

(3) *Determining whether a specific se is subject to this section.* The pro- sions of § 721.575(b)(1) apply to this ection.

pproved by the Office of Management d Budget under OMB control number 70-0012)

5 FR 26098, June 26, 1990]

Effective Date Note: At 55 FR 26098, ne 26, 1990, § 721.445 was added, effective ugust 27, 1990.

21.450 Substituted aromatic (generic).

(a) *Chemical substances and signifi- nt new uses subject to reporting.* (1) he chemical substance identified ge- erically as a substituted aromatic MN P-84-954) is subject to reporting nder this section for the significant w uses described in paragraph (a)(2) this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Re- irements as specified in 721.63(a)(1), (a)(3), (b) (concentra- on set at 0.1 percent), and (c).

(ii) *Hazard communication pro- am.* Requirements as specified in 721.72(a), (d), (e) (concentration set 0.1 percent), (f), (g)(1)(vii), (g)(2)(i), d (g)(2)(v). The provision of 721.72(d) requiring that employees provided with information on the cation and availability of MSDSs es not apply when an MSDS is not quired under § 721.72(c). The provi- ons of § 721.72(g) requiring place- ent of specific information on a label d MSDS do not apply when a label d MSDS are not required under 721.72(b) and (c), respectively.

(iii) *Industrial, commercial, and con- mer activities.* Requirements as ecified in § 721.80(g).

(iv) *Release to water.* Requirements specified in § 721.90 (a)(4), (b)(4), d (c)(4) (level set at 0.25 ppm).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i), and (k).

(2) *Limitations or revocation of certain notification requirments.* The provisions of § 721.185 apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26098, June 26, 1990]

Effective Date Note: At 55 FR 26098, June 26, 1990, § 721.450 was added, effective August 27, 1990.

§ 721.462 Benzenamine, 4-chloro-2-methyl-; benzenamine, 4-chloro-2-methyl-, hydrochloride; and benzenamine, 2-chloro-6-methyl-.

(a) *Chemical substances and significant new use subject to reporting.* (1) The chemical substances benzenamine, 4-chloro-2-methyl- (CAS Number 95-69-2); benzenamine, 4-chloro-2-methyl-, hydrochloride (CAS Number 3165-93-3); and benzenamine, 2-chloro-6-methyl- (CAS Number 87-63-8) are subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Specific requirements.* The provisions of subpart A of this Part apply to this section except as modified by this paragraph:

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes a substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under OMB control number 2070-0038)

[54 FR 12447, Mar. 27, 1989; 54 FR 17707, Apr. 25, 1989]

§ 721.520 Substituted polyglycidyl benzeneamine.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance, referred to by premanufacture notice number and its generic chemical name, is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: Substituted polyglycidyl benzeneamine, P-83-394.

(2) The significant new uses are:

(i) Use in spray applications.

(ii) Manufacture or processing without establishing a program whereby:

(A) During all stages of manufacture and processing of the substance, and during response to emergencies and spills involving the substance, any person employed by or under the control of the manufacturer or processor who may potentially be dermally exposed to the substance wears:

(*1*) Gloves which cover the arm up to the elbow and which have been determined to be impervious to the substance under conditions of exposure (gloves may be determined to be impervious by standard testing methods or by reliance on the manufacturer's specifications for those gloves selected);

(*2*) A face shield of at least 8 inches in length; and

(*3*) Clothing which covers any other exposed areas of the arms, legs, and torso.

(B) All workers described in paragraph (a)(ii)(A) of this section are informed in writing, or by presenting the information as part of a training program in a safety meeting where attendance is recorded, of the following: To avoid all contact with this substance; that structurally similar chemicals have been found to cause cancer, reproductive effects, kidney and liver effects in laboratory animals, and allergic reactions in humans; that this substance is a severe skin and eye irritant; and that the use of impervious gloves, face shields and other clothing to cover exposed areas of the arms, the legs, and the torso is required.

(C) A label is affixed to each container of the substance or of a formulation containing the substance which (in a print size no smaller than ten point type) contains, at a minimum, the following information:

WARNING: CONTACT WITH SKIN AND EYES IS HARMFUL

—Severe skin and eye irritant.

—Similar chemicals cause cancer, reproductive effects, and kidney and liver changes in laboratory animals. They have also caused allergic reactions in humans.

—Prevent all contact with skin, eyes, and clothing.

—Wear impervious gloves, face shield, and protective clothing. Promptly remove and wash contaminated non-impervious clothing before re-use.

—Wash thoroughly after handling and before eating, drinking, or smoking.

STORAGE INSTRUCTIONS:

—Keep closure tight and upright to prevent leakage.

—Keep container closed during shipment and when not in use.

—In case of spillage absorb with sand or vermiculite and flush with plenty of water.

FIRST AID:

—In case of eye contact, immediately flush with plenty of water and get immediate medical attention.

—In case of skin contact, immediately wash with soap and water and get immediate medical attention.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* In addition to the requirements of § 721.17, manufacturers, importers, and processors of the chemical substance identified in paragraph (a)(1) of this section must maintain the following records for five years from their creation:

(i) The names of persons informed, the date they are informed, and the means by which they are informed in accordance with paragraph (a)(2)(ii)(B) of this section.

(ii) The names of any transferee and the dates of any transfers of containers which are labeled in accordance with paragraph (a)(2)(ii)(C) of this section.

(iii) The method used to determine that the protective gloves are impervis to the substance and date and the ults of that determination.

2) [Reserved]

pproved by the Office of Management d Budget under control number 2070- 12)

) FR 43653, Oct. 31, 1984. Redesignated at FR 2845, Feb. 2, 1988]

21.523 Brominated aromatic compound (generic name).

(a) *Chemical substances and signifi- nt new uses subject to reporting.*,(1) he chemical substance identified ge- erically as a brominated aromatic mpound (PMN P-84-824) is subject reporting under this section for the gnificant new uses described in para- raph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Re- uirements as specified in 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iii), a)(5)(iv), (a)(5)(v), (a)(5)(vi), a)(5)(vii), (a)(6)(i), (b) (concentration et at 0.1 percent), and (c).

(ii) *Hazard communication pro- ram.* Requirements as specified in 721.72(a), (b)(1), (d), (e) (concentra- ion set at 0.1 percent), (f), (g)(1)(i), g)(1)(vii), (g)(2)(i), (g)(2)(ii), g)(2)(iii), (g)(2)(iv), and (g)(2)(v). The provision of § 721.72(d) requiring that employees be provided with informa- tion on the location and availability of MSDSs does not apply when an MSDS is not required under § 721.72(c). The provision of § 721.72(g) requiring placement of specific information on an MSDS does not apply when an MSDS in not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80 (j) (use as an additive flame retardant for plastics) and (q).

(iv) *Release to water.* Requirements as specified in § 721.90 (a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (g), (i), and (k).

(2) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(3) *Limitations or revocation of certain notification requirments.* The provisions of § 721.185 apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26098, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26098, June 26, 1990, § 721.523 was added, effective August 27, 1990.

§ 721.550 1,2-Benzenediamine, 4-ethoxy, sulfate.

(a) *Chemical substance and significant new use subject to reporting.* (1) The following chemical substance referred to by its chemical name is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section: 1,2-benzenediamine, 4-ethoxy, sulfate, PMN P-83-105.

(2) The significant new use is: Manufacture, import, or processing in powder or dry solid form.

(b) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0012)

(Sec. 5, Pub. L. 94-469, 90 Stat. 2012 (15 U.S.C. 2604))

[49 FR 43061, Oct. 26, 1984. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.555 1,3-Benzenediamine, 4-(1,1-dimethylethyl)-ar-methyl.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance, referred to by its PMN number and chemical name, is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: P-85-929; 1,3-Benzenediamine, 4-(1,1-dimethylethyl)-*ar*-methyl.

(2) The significant new uses are:

(i) Use other than for applications where the substance will be completely reacted (cured or used as a chemical intermediate).

(ii) Any method of disposal other than by landfill, incineration, or for wastewater from vent scrubbers, steam vacuum ejectors, pad washings, equipment washouts, and stormwater runoffs, wastewater treatment in permitted industrial wastewater treatment facilities. Each method of disposal must meet all applicable local, State, and Federal laws and regulations.

(iii) Any manner or method of manufacturing, importing, or processing without establishing a program whereby:

(A) Any person who may be exposed dermally to the substance wears:

(*1*) Gloves which have been determined to be impervious to the substance under the conditions of exposure, including the duration of exposure. This determination is made either by testing the gloves under the conditions of exposure or by evaluating the specifications provided by the manufacturer of the gloves. Testing or evaluation of specifications includes consideration of permeability, penetration, and potential chemical and mechanical degradation by the substance and associated chemical substances.

(*2*) Clothing which covers any other exposed areas of the arms, legs, and torso.

(*3*) Chemical safety goggles or equivalent eye protection.

(B) Any person who may be exposed to the substance through inhalation during manufacture, in addition to the dermal protective equipment described in paragraph (a)(2)(iii)(A) of this section, wears at a minimum, a National Institute for Occupational Safety and Health approved, category 23C respirator, organic vapor type. Use of the respirator must be according to 29 CFR 1910.134 and 30 CFR part 11. If a full-face type respirator is selected and worn, the chemical safety goggles requirement in paragraph (a)(2)(iii)(A)(*3*) of this section is waived.

(C)(*1*) All persons who may be exposed to the substance are informed, in writing, and by presenting the information as part of a training program in safety meetings at which attendance is recorded, by means of the following statement:

WARNING: Avoid all contact. Chemic
similar in structure to [insert appropri
name] have been found to cause chro
organ and systemic effects and cancer
laboratory animals. To protect yourself, y
must wear chemical safety goggles or equ
alent eye protection, impervious gloves, a
protective clothing while handling this m
terial.

(*2*) During manufacture, the war
ing statement in paragra
(a)(2)(iii)(C)(*1*) of this section shall i
clude the additional following stat
ment:

Respirators are required during clean-
or loading of bulk material.

(D) All persons that receive t
PMN substance are notified by mea
of a Material Safety Data She
("MSDS") which includes, at a mi
mum, the language specified in par
graph (a)(2)(iii)(C)(*1*) of this sectio
and specifies the requirements for pr
tective equipment in paragra
(a)(2)(iii)(A) and (a)(2)(iii)(B) of th
section.

(E) Each container of the substan
distributed in commerce has affixed
it a label which includes a Warni
Statement which consists, at a mi
mum, of the language specified
paragraph (a)(2)(iii)(C)(*1*) of this se
tion. The first word of the Warni
Statement is capitalized, and the ty
size of the first word is no small
than 6-point type for a label 5 squa
inches or less in area, 10-point ty
for a label above 5 but no greater th
10 square inches in area, 12-point ty
for a label above 10 but no great
than 15 square inches in area, 14-poi
type for a label above 15 but no gre
er than 30 square inches in area, or 1
point type for a label over 30 squa
inches in area. The type size of the r
mainder of the Warning Statement
no smaller than 6-point type. All r
quired label text is of sufficient prom
nence, and is placed with such co
spicuousness relative to other lab
text and graphic material, to ensu
that the Warning Statement is re
and understood by the ordinary ind
vidual under customary conditions
purchase and use.

(iv) Manufacturing and importi
the substance for any use at great
than the aggregrate volumes allow

under the consent order issued for Premanufacture Notice P-85-929, without submitting to EPA the corresponding scientifically valid toxicity test data required under that order, developed according to EPA's Good Laboratory Practice standards at 40 CFR part 792 and EPA's testing guidelines at 40 CFR 798.2650 and 798.3300.

(b) *Specific requirements.* The provisions of Subpart A of this part apply to this section except as modified by this paragraph.

(1) *Determining whether a use is a significant new use.* (i) Any person who intends to manufacture or import the substance identified in paragraph (a)(1) of this section shall, before commencing any manufacture or import, submit to EPA the information required under § 721.11(b).

(ii) EPA will review this information to determine whether the person has a *bona fide* intent to manufacture or import the substance. If EPA determines that the person has a *bona fide* intent to manufacture or import the substance, EPA will tell the person the specific production volumes which would constitute a significant new use under paragraph (a)(2)(iv) of this section.

(iii) A disclosure to a person with a *bona fide* intent to manufacture or import the substance of the specific production volumes which would constitute a significant new use under paragraph (a)(2)(iv) of this section will not be considered public disclosure of confidential business information under section 14 of the Act.

(2) *Recordkeeping.* In addition to the requirements of § 721.40, manufacturers, importers, and processors must maintain the following records for 5 years after the date they are created:

(i) Any determination that gloves are impervious to the substance.

(ii) Names of persons who have attended safety meetings in accordance with paragraph (a)(2)(iii)(C) of this section, the dates of such meetings, and copies of any written information provided in accordance with paragraph (a)(2)(iii)(C) of this section.

(iii) Copies of any MSDSs used.

(iv) Names and addresses of all persons to whom the substance is sold or transferred including shipment destination address if different, the date of each transfer, and the quantity of substance sold or transferred on such date.

(v) Copies of any labels used.

(vi) Any names used for the substance and the corresponding dates of use.

(vii) Quantities of the substance manufactured or imported, with the corresponding dates of manufacture or import.

(viii) Quantities of the substance purchased in the United States by processors of the substance, names and addresses of suppliers, and corresponding dates of purchase.

(ix) Information on disposal of the substance, including dates waste material is disposed of, location of disposal sites, volume of disposed solid material, estimated volume of any disposed liquid wastes containing the substance, and method of disposal.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 20795, May 21, 1990]

EFFECTIVE DATE NOTE: At 55 FR 20795, May 21, 1990, § 721.555 was added, effective August 3, 1990.

§ 721.557 Mixture of: 1,3-benzenediamine, 2-methyl-4,6-bis(methylthio)- (CAS NO. 104983-85-9) and 1,3-benzenediamine, 4-methyl-2,6-bis(methylthio)- (CAS NO. 102093-68-5).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance, referred to by its PMN number, chemical name, and CAS NOS., is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: P-86-1322, Mixture of: 1,3-benzenediamine, 2-methyl-4,6-bis(methylthio)- (CAS NO. 104983-85-9) and 1,3-benzenediamine, 4-methyl-2,6-bis(methylthio)- (CAS NO. 102093-68-5).

(2) The significant new uses are:

(i) Use other than for industrial uses.

(ii) Any method of disposal of the uncured substance other than by incineration.

(iii) Any manner or method of manufacturing, importing, or processing without establishing a program whereby:

(A) Any person who may be exposed dermally to the substance wears:

(*1*) Gloves which have been determined to be impervious to the substance under the conditions of exposure, including the duration of exposure. This determination is made either by testing the gloves under the conditions of exposure or by evaluating the specifications provided by the manufacturer of the gloves. Testing or evaluation of specifications includes consideration of permeability, penetration, and potential chemical and mechanical degradation by the substance and associated chemical substances.

(*2*) Clothing which covers any other exposed areas of the arms, legs, and torso.

(*3*) Chemical safety goggles or equivalent eye protection.

(B) Any person who may be exposed to the substance through inhalation, in addition to the dermal protective equipment described in paragraph (a)(2)(iii)(A) of this section, wears at a minimum a National Institute for Occupational Safety and Health approved category 19C air-supplied respirator. Use of the respirator is according to 29 CFR 1910.134 and 30 CFR part 11 subpart J. If a full-face type respirator is selected and worn, the chemical safety goggles requirement in paragraph (a)(2)(iii)(A)(*3*) of this section is waived.

(C) All persons who may be exposed to the substance are informed, in writing, and by presenting the information as part of a training program in safety meetings at which attendance is recorded, by means of the following statement:

WARNING: Avoid all contact. Chemicals similar in structure to (insert appropriate name) have been found to cause chronic organ and systemic effects and cancer in laboratory animals. To protect yourself, you must wear chemical safety goggles or equivalent eye protection, impervious gloves, and protective clothing while handling this material. In addition, you must wear a respirator if there is potential inhalation exposure.

(D) All persons that receive the PMN substance are notified, in advance of such receipt, by means of a Material Safety Data Sheet (MSDS) which includes, at a minimum, the language specified in paragraph (a)(2)(iii)(C) of this section, and specifies the requirements for protective equipment in paragraphs (a)(2)(iii) (A) and (B) of this section.

(E) Each container of the substance, or of a formulation containing the substance, distributed in commerce has affixed to it a label which includes a Warning Statement which consists, at a minimum, of the language specified in paragraph (a)(2)(iii)(C) of this section. The first word of the Warning Statement is capitalized, and the type size for the first word is no smaller than 6-point type for a label 5 square inches or less in area, 10-point type for a label above 5 but no greater than 10 square inches in area, 12-point type for a label above 10 but no greater than 15 square inches in area, 14-point type for a label above 15 but no greater than 30 square inches in area, or 18-point type for all labels over 30 square inches in area. The type size of the remainder of the Warning Statement is no smaller than 6-point type. All required label text is of sufficient prominence and is placed with such conspicuousness relative to other label text and graphic material to ensure that the Warning Statement is read and understood by the ordinary individual under customary conditions of purchase and use.

(iv) Manufacturing and importing the substance, for industrial uses, at greater than the aggregate volumes allowed under the consent order issued for Premanufacture Notice P-86-1322 effective on May 23, 1987, without performing the toxicity testing required under that order.

(b) *Specific requirements.* The provisions of subpart A of this Part apply to this section, except as modified by this paragraph.

(1) *Determining whether a use is a significant new use.* (i) A person who intends to manufacture or import the substance identified in paragraph (a)(1) of this section may submit to EPA the information required under § 721.11(b).

(ii) EPA will review this information to determine whether the person has a *bona fide* intent to manufacture or import the substance. If EPA deter-

nes that the person has a *bona fide*
tent to manufacture or import the
bstance, EPA will tell the person the
ecific production volume which
uld constitute a significant new use
der paragraph (a)(2)(iv) of this sec-
n.

iii) A disclosure to a person with a
na fide intent to manufacture or
port the substance of specific pro-
ction volume which would consti-
te a significant new use under para-
ph (a)(2)(iv) of this section will not
considered public disclosure of con-
ential business information under
tion 14 of the Act.

2) *Recordkeeping.* In addition to the
uirements of § 721.17, manufactur-
, importers, and processors must
intain the following records for 5
rs after the date they are created:

i) Any determination that gloves
impervious to the substance.

ii) Names of persons who have at-
ded safety meetings in accordance
h paragraph (a)(2)(iii)(C) of this
tion, the dates of such meetings,
l copies of any written information
vided in accordance with para-
ph (a)(2)(iii)(C) of this section.

iii) Copies of any MSDSs used.

iv) Names and addresses of all per-
s to whom the PMN substance is
d or transferred, including ship-
nt destination address if different,
date of each sale or transfer, and
quantity of substance sold or
nsferred on such date.

v) Copies of any labels used.

vi) Any names used for the sub-
nce and the corresponding dates of
.

vii) Quantities of the substance
nufactured or imported, with the
responding dates of manufacture or
port.

viii) Quantities of the substance
chased in the United States by
cessors of the substance, names
l addresses of suppliers, and corre-
nding dates of purchase.

x) Information on disposal of the
stance, including dates waste mate-
is disposed of, location of disposal
s, volume of disposed solid materi-
estimated volume of any disposed
id wastes containing the substance,
l method of disposal.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[54 FR 38384, Sept. 18, 1989]

§ 721.575 Benzoic acid, 3,3′-methylenebis [6 amino-, di-2-propenyl ester.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance, referred to by its CAS Number and chemical name, is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: 61386-02-5, Benzoic acid, 3,3′-methylenebis [6 amino-, di-2-propenyl ester.

(2) The significant new uses are: (i) Any use other than the use described in Premanufacture Notice P-82-438.

(ii) Any manner or method of manufacturing or processing the substance for the use described in Premanufacture Notice P-82-438 different than the manner or method described in Premanufacture Notice P-82-438.

(b) *Special provisions.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Determining whether a specific use is subject to this rule.* (i) A person who intends to manufacture, import, or process the chemical substance identified in paragraph (a)(1) of this section may ask EPA whether the use for which the person intends to manufacture, import, or process the substance is a significant new use under paragraph (a)(2)(i) of this section. EPA will answer such an inquiry only if EPA determines that the person has a *bona fide* intent to manufacture, import, or process the chemical substance.

(ii) To establish a *bona fide* intent to manufacture, import, or process the chemical substance, the person must submit to EPA:

(A) All materials and statements required under § 721.6.

(B) The specific use for which the person intends to manufacture, import, or process the chemical substance.

(iii) EPA will review the information submitted by the person under this paragraph to determine whether the person has a *bona fide* intent to manufacture, import, or process the chemical substance.

(iv) If EPA determines that the person has a *bona fide* intent to manufacture, import, or process the chemical substance, EPA will tell the person whether the use for which the person intends to manufacture, import, or process the substance is a significant new use under paragraph (a)(2)(i) of this section. If EPA tells the person that the intended use is not a significant new use under paragraph (a)(2)(i) of this section, EPA will tell the person what activities would constitute a significant new use under paragraph (a)(2)(ii) of this section.

(v) A disclosure to a person with a *bona fide* intent to manufacture, import, or process the chemical substance of the significant new uses subject to this section will not be considered public disclosure of confidential business information under section 14 of the Act.

(vi) EPA will answer an inquiry on whether a particular use is subject to this section within 30 days after receipt of a complete submission under paragraph (b)(1) of this section.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0012)

[51 FR 16687, May 6, 1986. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.600 Polybrominated biphenyls.

(a) *Chemical substances and significant new use subject to reporting.* (1) The chemical substances 1,1′-(Biphenyl, 4-bromo-(CAS No. 92-66-0); 1,1′-Biphenyl, 4,4′-dibromo-(CAS No. 92-86-4); 1,1′-Biphenyl, 2-bromo-, (CAS No. 2052-07-5); 1,1′- Biphenyl, 3-bromo-, (CAS No. 2113-57-7); 1,1′- Biphenyl, 2,2′, 3,3′ 4,4′, 5,5′, 6,6′- decabromo- (CAS No. 13654-09-6,); Nonabromobiphenyl (CAS No. 27753-52-2); Octabromobiphenyl (CAS No. 27858-07-7); and Hexabromobiphenyl (CAS No. 36355-01-8) are subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Special provisions.* The provisions of subpart A of this part apply to this section except as modified by th paragraph.

(1) *Persons who must report.* Sectio 721.5 applies to this section except fo § 721.5(a)(2). A person who intends t manufacture, import, or process f commercial purposes a substance ide tified in paragraph (a)(1) of this se tion and intends to distribute the su stance in commerce must submit a si nificant new use notice.

(2) [Reserved]

(Approved by the Office of Manageme and Budget under control number 207 0038)

[52 FR 2703, Jan. 26, 1987; 52 FR 4079, Fe 9, 1987. Redesignated at 53 FR 2845, Feb 1988]

§ 721.612 N,N'-Bis(2-(2-(3-alkyl)thiazolin vinyl)-1,4-phenylenediamine meth sulfate double salt (generic name).

(a) *Chemical substances and signi cant new uses subject to reporting.* (The chemical substance identified g nerically as *N,N'*-Bis(2-(2-(alkyl)thiazoline)vinyl)-1,4-phenylenediamine methyl sulfa double salt (PMN P-84-913) is subje to reporting under this section for th significant new uses described in pa graph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* R quirements as specified § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(ii (a)(5)(iv),(a)(5)(v), (a)(5)(v (a)(5)(vii), (a)(6)(i), (b) (concentrati set at 1 percent), and (c).

(ii) *Hazard communication pr gram.* Requirements as specified § 721.72(a), (b)(2), (c), (d), (e), (f) (co centration set at 1 percent), (g)(1)(i (g)(1), (may be lethal if inhaled or i contact with eyes), (g)(2)(i), (g)(2)(i (g)(2)(iv), (g)(2)(v), and (g)(5). Th provision of § 721.72(d) requiring th employees be provided with inform tion on the location and availability MSDSs does not apply when an MSD is not required under § 721.72(c). Th provision of § 721.72(g) requir placement of specific information an MSDS does not apply when MSDS in not required und § 721.72(c).

(iii) *Industrial, commercial, and con- mer activities.* Requirements as ecified in § 721.80 (j).

(b) *Specific requirements.* The provi- ons of subpart A of this part apply to is section except as modified by this aragraph.

(1) *Recordkeeping.* The following cordkeeping requirements are appli- ble to manufacturers, importers, and ocessors of this substance, as speci- ed in § 721.125(a) through (i), and).

(2) *Limitations or revocation of cer- in notification requirements.* The rovisions of § 721.185 apply to this ection.

pproved by the Office of Management d Budget under OMB control number 70-0012)

5 FR 26098, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26098, ne 26, 1990, § 721.612 was added, effective ugust 27, 1990.

721.617 Boric acid, alkyl and substituted alkyl esters (generic name).

(a) *Chemical substance and signifi- nt new uses subject to reporting.* (1) he chemical substance boric acid, lkyl and substituted alkyl esters MN P-86-1252) is subject to report- g under this section for the signifi- ant new uses described in paragraph)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Re- uirements as specified in 721.63(a)(1) and (a)(3), (b) [concen- ration set at 0.1 percent], and (c).

(ii) *Hazard communication pro- ram.* Requirements as specified in 721.72(d), (e) [concentration set at 1 percent], (f), and (g)(1)(i), g)(1)(iv), (g)(1)(vii), (g)(1)(viii), and g)(1)(ix), (g)(2)(i) and (g)(2)(v), g)(4)(i) and (g)(4)(iii), and (g)(5). The rovisions of § 721.72(d) requiring em- loyees to be provided with informa- ion on the location and availability of written hazard communication pro- ram and MSDSs do not apply when he written program and MSDS are ot required under § 721.72(a) and (c), espectively. The provision of 721.72(g) requiring placement of spe- ific information on a MSDS does not pply when a MSDS was not required nder § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(iv) *Disposal.* Requirements as specified in § 721.85(a)(1) and (b)(1).

(v) *Release to water.* Requirements as specified in § 721.90(a)(3), (b)(3), and (c)(3).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26108, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26108, June 26, 1990, § 721.617 was added, effective August 27, 1990.

§ 721.648 1-Chloro-2-bromoethane.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance 1-chloro-2-bromoethane (CAS No. 107-04-0) is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: any use.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[53 FR 2845, Feb. 2, 1988]

§ 721.770 Coconut oil, reaction products with tetrahydroxy branched alkane esters of trisubstituted benzenepropanoic acid. (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as coconut oil reaction products with tetrahydroxy branched alkane esters of trisubstituted benzenepropanoic acid (PMN P-89-770) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(q)

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26099, June 26, 1990]

Effective Date Note: At 55 FR 26099, June 26, 1990, § 721.770 was added, effective August 27, 1990.

§ 721.782 Aromatic diamines (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substances aromatic diamines (PMN P-86-501 and P-86-503) are subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iv) through (a)(5)(xv), (a)(6)(i) and (a)(6)(ii), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e) [concentration set at 0.1 percent], (f), (g)(1)(iv), (g)(1)(vii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), (g)(2)(v) and (g)(5).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(iv) *Disposal.* Requirements as specified in § 721.85 (a)(1) and (a)(2), (b)(1) and (b)(2), and (c)(1) and (c)(2).

(v) *Release to water.* Requirements as specified in § 721.90(a)(2)(vi), (b)(2)(vi), and (c)(2)(vi).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26109, June 26, 1990]

Effective Date Note: At 55 FR 26109, June 26, 1990, § 721.782 was added, effective August 27, 1990.

§ 721.783 Dialkenylamide (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as a dialkenylamide (P-87-502) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

i) *Protection in the workplace.* Re-
rements as specified in § 721.63
(1), (a)(3), (a)(4), (a)(5)(iii),
(5)(xii), (a)(5)(xiii), (a)(5)(xiv),
(5)(xv), (a)(6)(v), (b) (concentration
at 0.1 percent), and (c).

ii) *Hazard communication pro-*
m. Requirements as specified in
21.72(a), (b)(2), (c), (d), (e) (concen-
tion set at 0.1 percent), (f),
(1)(vi), (g)(1)(vii), (g)(1)(ix),
(2)(i), (g)(2)(ii), (g)(2)(iv), (g)(2)(v),
d (g)(5).

iii) *Industrial, commercial, and con-*
ner activities. Requirements as
ecified in § 721.80 (g) and (q).

iv) *Disposal.* Requirements as speci-
d in § 721.85 (a)(1), (a)(2), (b)(1),
(2) and (c)(1), (c)(2).

b) *Specific requirements.* The provi-
ns of subpart A of this part apply to
s section except as modified by this
ragraph.

1) *Recordkeeping.* The following
ordkeeping requirements are appli-
ble to manufacturers, importers, and
ocessors of this substance, as speci-
d in § 721.125(a) through (j).

2) *Limitations or revocation of cer-*
in notification requirements. The
ovisions of § 721.185 apply to this
nificant new use rule.

3) *Determining whether a specific*
e is subject to this section. The pro-
ions of § 721.575(b)(1) apply to this
ction.

pproved by the Office of Management
d Budget under OMB control number
70-0012)

5 FR 26099, June 26, 1990]

FFECTIVE DATE NOTE: At 55 FR 26099,
ne 26, 1990, § 721.783 was added, effective
gust 27, 1990.

21.792 Alkylated diarylamine, sulfur-
ized (generic name).

a) *Chemical substance and signifi-*
nt new uses subject to reporting. (1)
e chemical substance identified ge-
rically as alkylated diarylamine, sul-
rized (PMN P-89-506) is subject to
porting under this section for the
gnificant new uses described in para-
aph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and con-*
mer activities. Requirements as
ecified in § 721.80(q)

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), and (c).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26099, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26099, June 26, 1990, § 721.792 was added, effective August 27, 1990.

§ 721.800 Dicarboxylic acid monoester.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance referred to by its premanufacture notice number and its generic chemical name is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: dicarboxylic acid monoester, P-83-255.

(2) The significant new uses are:

(i) Any manufacture in the United States for commercial purposes.

(ii) Failure to require the use of gloves determined to be impervious to the substance, and/or failure to require the use of clothing to prevent dermal contact for any person involved in any processing or use operation where dermal contact may occur. (Gloves may be determined to be impervious to the substance either by testing the gloves under the conditions of use or by relying on the manufacturer's specifications.)

(iii) Distribution in commerce by any person, including importers, processors, and distributors, without affixing to each container of any formulation containing the substance a label that includes, in letters no smaller than 10 point type, the following statements:

WARNING! HARMFUL IF INHALED OR ABSORBED THROUGH THE SKIN. MAY CAUSE REPRODUCTIVE EFFECTS.

—Do not get in eye, on skin, or clothing.
—Do not breathe (vapor, mist, spray, dust).
—Use with adequate ventilation.
—Wear impervious gloves and protective equipment to prevent contact or exposure.
—Promptly remove contaminated non-impervious clothing, wash before reuse.
—Discard contaminated leather shoes.
—Wash thoroughly after handling, and before eating, drinking, or smoking.
—Keep container closed.

FIRST AID: In case of contact.

EYES: Immediately flush with water for at least 15 minutes.

SKIN: Promptly wash thoroughly with mild soap and water.

INHALATION: Remove to fresh air. If breathing is difficult, give oxygen.

INGESTION: If conscious, give water and induce vomiting.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* In addition to the requirements of § 721.17, importers and processors of the chemical substance identified in paragraph (a)(1) of this section must maintain the following records for five years from their creation:

(i) The names of persons required to wear protective clothing.

(ii) The name and address of each person to whom the substance is sold or transferred and the date of such sale or transfer.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0012)

[49 FR 43064, Oct. 26, 1984. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.818 Dimer acids, polymer with polyalkylene glycol, bisphenol A-diglycidyl ether, and alkylenepolyols polyglycidyl ethers (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance dimer acids, polymer with polyalkylene glycol, bisphenol A-diglycidyl ether, and alkylenepolyols polyglycidyl ethers (PMN P-86-628) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1) and (a)(3), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (c), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(vi) and (g)(1)(vii), (g)(2)(i) and (g)(2)(v), (g)(4)(i), and (g)(5). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k) and (y).

(iv) *Disposal.* Requirements as specified in § 721.85(a)(1) and (a)(2) and (b)(1) and (b)(2).

(*b*) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26109, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26109, June 26, 1990, § 721.818 was added, effective August 27, 1990.

§ 721.853 Alkylated diphenyl oxide (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance alkylated diphenyl oxide (PMN P-84-1079) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1) and (a)(3), (b) [concentration set at 1.0 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (c), (d), (e) [concentration set at 1.0 percent], (f), and (g)(1)(vi) and (g)(1)(ix), (g)(2)(i) and (g)(2)(v), and (g)(5). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(g). The term intermediate as used in § 721.80(g) is defined as intermediate for a sulfonated product to be used on site to manufacture sulfonated surfactants or as a product sold to others as a raw material to make sulfonated surfactants.

(iv) *Release to water.* Requirements as specified in § 721.90(a)(3), (b)(3), and (c)(3).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26109, June 26, 1990]

Effective Date Note: At 55 FR 26109, June 26, 1990, § 721.853 was added, effective August 27, 1990.

§ 721.950 Epibromohydrin.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance epibromohydrin, CAS Number 3132-64-7, [Listed in TSCA Inventory as oxirane,(bromoethyl)-] is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is any use.

(b) *Special requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[52 FR 41300, Oct. 27, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.975 Trichlorobutylene oxide.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance trichlorobutylene oxide (TCBO), CAS Number 3083-25-8, [Listed in TSCA Inventory as oxirane, (2,2,2-trichloroethyl)-] is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is any use.

(b) *Special requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[52 FR 41300, Oct. 27, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.976 Perfluoroalkyl epoxide (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substance identified generically as perfluoroalkyl epoxide (PMN P-86-562) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (b) (concentration set at 0.1 percent), and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (d), (e) (concentration set at 0.1 percent), (f), (g)(1)(vi), (g)(1)(vii), (g)(2)(i) and (g)(2)(v). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when an MSDS is not required under § 721.72(c). The provision of § 721.72(g) requiring placement of specific information on an MSDS does not apply when an MSDS is not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(g) and (q).

(iv) *Disposal.* Requirements as specified in § 721.85(a)(1), (a)(2), (b)(1), (b)(2), (c)(1), and (c)(2).

(v) *Release to water.* § 721.90(a)(3), (b)(3), and (c)(3).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (g), (i), (j), and (k).

(2) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(3) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26099, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26099, June 26, 1990, § 721.976 was added, effective August 27, 1990.

§ 721.1060 Formaldehyde, polymer with bisphenol A and substituted phenol (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as formaldehyde, polymer with bisphenol A and substituted phenol (PMN P-89-279) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(p) (volume set at 161,000 kg).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26100, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26100, June 26, 1990, § 721.1060 was added, effective August 27, 1990.

§ 721.1078 Haloalkyl substituted cyclic ethers.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substances haloalkyl substituted cyclic ethers (PMN P-85-368 and P-85-369) are subject to reporting under this section for the significant new uses described in this paragraph.

(i) The significant new uses are:

(A) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(i), (a)(5)(ii), (a)(5)(iii) and (a)(6)(v) and (a)(6)(vi), (b) [concentration set at 1.0 percent], and (c).

(B) *Hazard communication program.* Requirements as specified in § 721.72(a), (d), (e) [concentration set at 1.0 percent], (f), and (g)(1)(iii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv) and (g)(2)(v), and (g)(5). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c). The provisions of § 721.72(g) requiring placement of specific information on a label and MSDS do not apply when a label and MSDS are not required under § 721.72(b) and (c), respectively.

(C) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(D) *Disposal.* Requirements as specified in § 721.85(a)(1) and (a)(2), (b)(1) and (b)(2), and (c)(1) and (c)(2).

(ii) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(A) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of the substances, as specified in § 721.125(a) through (k).

(B) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(C) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(2) The chemical substance haloalkyl substituted cyclic ether (PMN P-85-367) is subject to reporting under this section for the significant new uses described in this paragraph.

(i) The significant new uses are:

(A) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(i), (a)(5)(ii), (a)(5)(iii), and (a)(6)(v) and (a)(6)(vi), (b) [concentration set at 0.1 percent], and (c).

(B) *Hazard communication program.* Requirements as specified in § 721.72(a), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(iii), (g)(1)(vii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv) and (g)(2)(v), and (g)(5). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c). The provisions of § 721.72(g) requiring placement of specific information on a label and MSDS do not apply when a label and MSDS are not required under § 721.72(b) and (c), respectively.

(C) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(D) *Disposal.* Requirements as specified in § 721.85(a)(1), (a)(2), (b)(1) and (b)(2), and (c)(1) and (c)(2).

(ii) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(A) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(B) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(C) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(b) [Reserved]

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26109, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26109, June 26, 1990, § 721.1078 was added, effective August 27, 1990.

§ 721.1082 Substituted ethylene diamine, methyl sulfate quaternized (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as ethylene diamine, methyl sulfate quaternized (P-89-650) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Uses as specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance: Recordkeeping requirements specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 17381, Apr. 24, 1990]

§ 721.1150 Hexachloronorbornadiene.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance 1,2,3,4,7,7-hexachloronorbornadiene, CAS Number 3389-71-7, is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: Use other than as an intermediate in the production of isodrin or endrin.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Definitions.* In addition to the definitions in § 721.3, the following definitions apply:

(i) "Endrin" means the pesticide 2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1a alpha, 2*beta*,2a*beta*,3*alpha*, 6*alpha*,6a*beta*, 7*beta*,7a*alpha*)-, CAS Number 72-20-8.

(ii) "Isodrin" means the pesticide 1,4:5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1*alpha*, 4*alpha*, 4a*beta*, 5*beta*, 8*beta*, 8a*beta*)-, CAS Number 465-73-6.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[50 FR 47538, Nov. 19, 1985. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1175 Hexafluoropropylene oxide.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance hexafluoropropylene oxide (HFPO), CAS Number 428-59-1 [Listed in TSCA Inventory as oxirane, trifluoro(trifluoromethyl)-] is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is any use other than as an intermediate in the manufacture of fluorinated substances in an enclosed process.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Definitions.* In addition to the definitions in § 721.3, the following definitions apply to this section:

(i) "Enclosed process" means a process that is designed and operated so that there is no intentional release of any substance present in the process. A process with fugitive, inadvertent, or emergency relief releases remains an enclosed process so long as measures are taken to prevent worker exposure to and environmental contamination from the releases.

(ii) [Reserved]

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[52 FR 41300, Oct. 27, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1200 Hexamethylphosphoramide.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance hexamethylphosphoramide, CAS Number 680-31-9, is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Special provisions.* The provisions of subpart A of the part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a signficant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[51 FR 9453, Mar. 19, 1986. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1250 Isopropylamine distillation residues and ethylamine distillation residues.

(a) *Chemical substances and significant new use subject to reporting.* (1) The following chemical substances referred to by their Chemical Abstracts Service (CAS) register numbers and chemical names are subject to reporting under this section for the significant new use identified in paragraph (a)(2) of this section: CAS No. 79771-08-7, isopropylamine distillation residues, and CAS No. 79771-09-98, ethylamine distillation residues.

(2) The significant new use is use in metalworking fluids.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Notice Requirements and Procedures.* Section 721.10 applies to this section, except persons submitting a notice must complete only Parts I and III of the notice form.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0012)

(Sec. 5, Pub. L. 94-469, 90 Stat. 2012 (15 U.S.C. 2604))

[49 FR 46378, Nov. 26, 1984. Redesignated at 51 FR 23539, June 30, 1986, and further redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1300 Methyl n-butyl ketone.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance methyl n-butyl ketone, CAS Number 591-78-6, is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is any use.

(b) *Specific Requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[52 FR 11825, Apr. 13, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1460 Naphthalene,1,2,3,4-tetrahydro(1-phenylethyl) (specific name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance naphthalene,1,2,3,4-tetrahydro(1-phenylethyl) (PMN P-85-1331) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (c), (e) [concentration set at 1.0 percent], (f), and (g)(3)(i) and (g)(3)(ii), (g)(4)(i) and (g)(4)(iii), and (g)(5).

(ii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(iii) *Disposal.* Requirements as specified in § 721.85(a)(1) and (2), (b)(1) and (b)(2), and (c)(1) and (c)(2).

(v) *Release to water.* Requirements as specified in § 721.90(a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26110, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26110, June 26, 1990, § 721.1460 was added, effective August 27, 1990.

§ 721.1465 2-Napthalenecarboxamide-N-aryl-3-hydroxy-4-arylazo (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance 2-naphthalenecarboxamide-N-aryl-3-hydroxy-4-arylazo (PMN P-87-1265) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(4), (a)(5)(iii) through (a)(5)(vii), and (a)(6)(i), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b), (c), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(i), (g)(1)(v), and (g)(1)(vii), and (g)(2)(ii) and (g)(2)(iv).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply t
significant new use rule.

(3) *Determining whether a sp*
use is subject to this section. Th
visions of § 721.575(b)(1) apply t
section.

(Approved by the Office of Manag
and Budget under OMB control n
2070-0012)

[55 FR 26110, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR
June 26, 1990, § 721.1465 was added,
tive August 27, 1990.

§ 721.1475 Pentachloroethane.

(a) *Chemical substance and si*
cant new use subject to reportin
The chemical substance penta
oethane, CAS Number 76-01-7, is
ject to reporting under this sectio
the significant new use describ
paragraph (a)(2) of this section.

(2) The significant new use is
use.

(b) *Specific requirements.* The p
sions of subpart A of this part app
this section except as modified by
paragraph.

(1) *Persons who must report.* Se
721.5 applies to this section excep
§ 721.5(a)(2). A person who inten
manufacture, import, or process
commercial purposes the subst
identified in paragraph (a)(1) of
section and intends to distribute
substance in commerce must subm
significant new use notice.

(2) [Reserved]

(Approved by the Office of Manage
and Budget under control number
0038)

[51 FR 32079, Sept. 9, 1986. Redesignat
53 FR 2845, Feb. 2, 1988]

§ 721.1483 6-Nitro-2(3H)-benzoxazolo

(a) *Chemical substances and sig*
cant new uses subject to reporting
The chemical substance 6-nitro-2(
benzoxazolone (PMN P-84-963) is
ject to reporting under this section
the significant new uses describe
paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.*
quirements as specified
§ 721.63(a)(1), (a)(3), (b) (concen
tion set at 0.1 percent), and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (e) (concentration set at 0.1 percent), (f), (g)(1)(vii), (g)(2)(i), (g)(2)(ii), and (g)(2)(v). The provisions of § 721.72(g) requiring placement of specific information on a label and MSDS do not apply when a label and MSDS are not required under § 721.72(b) and (c), respectively.

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(v)(1), (w)(1), (x)(1), and (y)(2).

(iv) *Release to water.* Requirements as specified in § 721.90(a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(d), (e), (f), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26100, June 26, 1990]

Effective Date Note: At 55 FR 26100, June 26, 1990, § 721.1483 was added, effective August 27, 1990.

§ 721.1488 Nitrothiophenecarboxylic acid, ethyl ester, bis[[[(substituted)]amino]alkylphenyl]azo] (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance nitrothiophenecarboxylic acid, ethyl ester, bis[[[(substituted)]amino]alkylphenyl]azo] (PMN P-87-304) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(f), (k), (v)(1), (w)(1), and (x)(1).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), and (c).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26110, June 26, 1990]

Effective Date Note: At 55 FR 26110, June 26, 1990, § 721.1488 was added, effective August 27, 1990.

§ 721.1515 Pentabromoethylbenzene.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance pentabromoethylbenzene (CAS Number 85-22-3) is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Specific requirements.* The provisions of subpart A of this Part apply to this section except as modified by this paragraph:

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under OMB control number 2070-0038)

[54 FR 18286, Apr. 28, 1989]

§ 721.1542 Trisubstituted phenol (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1)

The chemical substance trisubstituted phenol (PMN P-85-605) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iii) through (a)(5)(vii) and (a)(6)(i), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (d), (e) [concentration set at 0.1 percent], (f), (g)(1)(vii), and (g)(2)(i), (g)(2)(ii), (g)(2)(iv), and (g)(2)(v). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c). The provisions of § 721.72(g) requiring placement of specific information on a label and MSDS do not apply when a label and MSDS are not required under § 721.72(b) and (c), respectively.

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26111, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26111, June 26, 1990, § 721.1542 was added, effective August 27, 1990.

§ 721.1560 1,1-Dimethylpropyl peroxyester (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance 1,1-dimethylpropyl peroxyester (PMN P-85-680) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(i), and (a)(6)(v), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(vii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), and (g)(2)(v), and (g)(4)(i).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(iv) *Disposal.* Requirements as specified in § 721.85(a)(3) and (b)(3).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26111, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26111, June 26, 1990, § 721.1560 was added, effective August 27, 1990.

§ 721.1565 Substituted alkyl peroxyhexane carboxylate (mixed isomers) (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance substituted alkyl peroxyhexane carboxylate (mixed isomers) (PMN-86-1493) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1) and (a)(3), (b) [concentration set at 0.1 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e) [concentration set at 0.1 percent], (f), and (g)(1)(i) and (g)(1)(vii), (g)(2)(i) and (g)(2)(v), and (g)(4)(i).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(iv) *Disposal.* Requirements as specified in § 721.85(a)(1) and (a)(2) and (b)(1) and (b)(2).

(v) *Release to water.* Requirements as specified in § 721.90(a)(4) [concern level of 5 ppb], (b)(4) [concern level of 5 ppb], and (c)(4) [concern level of 5 ppb].

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26111, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26111, June 26, 1990, § 721.1565 was added, effective August 27, 1990.

§ 721.1585 Substituted phosphate ester (generic).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substance identified generically as a substituted phosphate ester (PMN P-85-730) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (b) (concentration set at 0.1 percent), and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e) (concentration set at 0.1 percent), (f), (g)(1)(iv), (g)(1)(vii), (g)(2)(i), (g)(2)(v), and (g)(5).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80 (k).

(iv) *Release to water.* Section 721.90 (a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(3) Determining whether a specific use is subject to this section. The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26100, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26100, June 26, 1990, § 721.1585 was added, effective August 27, 1990.

§ 721.1608 Phosphonium salt (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance phosphonium salt (PMN Number P-84-820) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1) and (a)(3), (b) [concentration set at 1.0 percent], and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (d), (e) [concentration set at 1.0 percent], (f), and (g)(1)(iii) and (g)(2)(i) and (g)(2)(v). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when a MSDS was not required under § 721.72(c). The provisions of § 721.72(g) requiring placement of specific information on a label and MSDS do not apply when a label and MSDS are not required under § 721.72(b) and (c), respectively.

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(k).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26111, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26111, June 26, 1990, § 721.1608 was added, effective August 27, 1990.

§ 721.1630 Polymer of alkanepolyol and polyalkylpolyisocyanatocarbomonocycle, acetone oxime-blocked (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as a polymer of alkanepolyol and polyalkylpolyisocyanatocarbomonocycle, acetone oxime-blocked (PMN P-88-1658) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26100, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26100, June 26, 1990, § 721.1630 was added, effective August 27, 1990.

§ 721.1634 Polymer of alkenoic acid, substituted alkylacrylate sodium salt (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identifed generically as polymer of alkenoic acid, substituted alkylacrylate sodium salt (PMN P-88-854) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80 (l), (v)(1), (v)(2), (w)(1), (w)(2), (x)(1), and (x)(2).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(i).

(2) *Limitations or revocation of certain notification requirements.* The

provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26100, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26100, June 26, 1990, § 721.1634 was added, effective August 27, 1990.

§ 721.1750 Potassium N,N-bis (hydroxyethyl) cocoamine oxide phosphate, and potassium N,N-bis (hydroxyethyl) tallowamine oxide phosphate.

(a) *Chemical substances and significant new use subject to reporting.* (1) The following chemical substances, identified by their chemical names and CAS Number are subject to reporting under this part for the significant new use identified in paragraph (a)(2) of this section: Potassium N,N-bis (hydroxyethyl) cocoamine oxide phosphate (CAS Number 855712-26-1), and potassium N,N-bis (hydroxyethyl) tallowamine oxide phosphate (CAS Number 855712-27-2).

(2) The significant new use is: Use in a consumer product at concentrations greater than five percent by weight.

(b) *Specific Requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Definitions.* In addition to the definitions in § 721.3, the following definitions apply to this section:

"Consumer" means any natural person who uses products for personal rather than business purposes.

"Consumer product" means any chemical substance which is directly, or as part of a mixture, sold or made available to consumers for their use in or around a permanent or temporary household or residence, in or around a school, or in recreation.

(2) *Persons who must report.* The provisions of § 721.5 apply to determine persons who must report under this section, except § 721.5(a)(2) does not apply to a person who intends to distribute either of the substances in commerce as part of a mixture at concentrations of five percent or less by weight of the mixture.

(3) *Notice requirements and procedures.* Section 721.10 applies to this section, except a person submitting a notice must complete only Parts I and II of the notice form.

[49 FR 35018, Sept. 5, 1984. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.1875 Substituted methylpyridine and substituted 2-phenoxypyridine.

(a) *Chemical substances and significant new uses subject to reporting.* (1) The following chemical substances, referred to by their PMN numbers and generic chemical names, are subject to reporting under this section for the significant new uses described in paragraphs (a)(2) and (3) of this section: Substituted methylpyridine (P-83-24, P-83-49, and P-83-272) and substituted 2-phenoxypyridine (P-83-23 and P-83-75).

(2) The significant new uses for P-83-49 and P-83-272 are manufacture or processing without:

(i) Requiring use of the following personal protective equipment for persons involved in any operation where dermal contact and/or inhalation of the substances may occur, and where local exhaust ventilation is present at the site of the operation:

(A) Chemical cartridge respirator, approved by the National Institute for Occupational Safety and Health for protection from organic vapors, and used and fitted according to 29 CFR 1910.134 and 30 CFR part 11.

(B) Chemical worker gloves and aprons or other equivalent personal protective clothing determined to be impervious to the particular substance in its conditions of use. (Equipment may be determined to be impervious either by testing under the conditions of use, including the duration of exposure, or by evaluating the specifications supplied by the supplier of the equipment.)

(ii) Requiring use of the following personal protective equipment for persons involved in and in the immediate area of any operation where dermal contact and/or inhalation of the substance may occur, and where local exhaust ventilation is not present at the site of the operation:

(A) Full facepiece, positive pressure air-supplied respirator, approved by the Bureau of Mines, Department of the Interior or by the National Institute of Occupational Safety and Health fitted according to procedures established at 29 CFR 1910.134.

(B) Chemical worker gloves and aprons, or other equivalent personal protective clothing determined to be impervious to the particular substance in its conditions of use. (Equipment may be determined to be impervious either by testing under the conditions of use, including the duration of exposure, or by evaluating the specifications supplied by the supplier of the equipment.)

(iii) Notifying in writing, each employee required to use protective equipment that these chemical substances may present a hazard of liver, kidney, and nervous system toxicity unless the specified protective equipment is used.

(3) The significant new uses for P-83-23, P-83-24, and P-83-75 are manufacture or processing without:

(i) Requiring the use of the following personal protective equipment for persons involved in any operation where dermal contact may occur:

(A) Chemical goggles.

(B) Chemical worker gloves and aprons, or other equivalent personal protective clothing determined to be impervious to the particular substance in its conditions of use. (Equipment may be determined to be impervious either by testing under the conditions of use, including the duration of exposure, or by evaluating the specifications supplied by the supplier of the equipment.)

(ii) Notifying in writing, each employee required to use protective equipment that these chemical substances may present a hazard of liver, kidney, and nervous system toxicity unless the specified protective equipment is used.

(b) *Specific requirements.* In addition to the general provisions of subpart A of this part, the following specific requirements apply.

(1) *Recordkeeping.* In addition to the requirements of § 721.17, manufacturers, importers, and processors of the chemical substances identified in paragraph (a) of this section must maintain the following records for five years from the date of their creation:

(i) The names of persons required t wear protective clothing and/or equip ment.

(ii) Records of respirator fit tests fo each person required to wear a respira tor.

(iii) The names and addresses of pe sons to whom any of these substance are sold or transferred and the date o such sale or transfer.

(2) [Reserved]

(Approved by the Office of Managemen and Budget under control number 207 0012)

[49 FR 50400, Dec. 28, 1984. Redesignated a 53 FR 2845, Feb. 2, 1988]

§ 721.1890 Carboxy alkyl silyl salt (generi name).

(a) *Chemical substance and signif cant new uses subject to reporting.* (1 The chemical substance identified g nerically as carboxy alkyl silyl sa (PMN P-89-292) is subject to reportin under this section for the significan new uses described in paragraph (a)(2 of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and co sumer activities.* Requirements a specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The prov sions of subpart A of this part apply t this section except as modified by th paragraph.

(1) *Recordkeeping.* The followin recordkeeping requirements are appl cable to manufacturers, importers, an processors of this substance, as spec fied in § 721.125(a), (b), (c) and (i).

(2) *Limitations or revocation of ce tain notification requirements.* Th provisions of § 721.185 apply to th significant new use rule.

(3) Determining whether a specif use is subject to this section. The pr visions of § 721.575(b)(1) apply to th section.

(Approved by the Office of Manageme and Budget under OMB control numb 2070-0012)

[55 FR 26101, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 2610 June 26, 1990, § 721.1890 was added, eff tive August 27, 1990.

§ 721.2070 Alkylene glycol terephthalate and substituted benzoate esters (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance identified generically as alkylene glycol terephthalate and substituted benzoate esters (PMN P-89-596) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(q)

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), (c) and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26101, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26101, June 26, 1990, § 721.2070 was added, effective August 27, 1990.

§ 721.2100 Derivative of tetrachloroethylene.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The following chemical substance referred to by its premanufacture notice number and generic chemical name is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section: Derivative of tetrachloroethylene, P-82-684.

(2) The significant new uses are: (i) Manufacture or processing without requiring use of the following by persons employed by or under the control of the manufacturer or processor who are involved in, and in the immediate area of, any operation where dermal contact and/or inhalation of the substance may occur:

(A) A respirator, approved by the National Institute for Occupational Safety (NIOSH) to provide protection against dusts having an air contamination level not less than 0.05 mg per cubic meter of air and fitted according to procedures established by the Occupational Safety and Health Administration and Mine Safety and Health Administration regulations and set forth at 29 CFR 1910.134, and 30 CFR part 11, respectively, and

(B) Gloves which are determined to be impervious to the substance under the conditions of potential exposure (gloves must be determined to be impervious to the substance either by testing the gloves under the conditions of exposure, including the duration of exposure, or by evaluating the data and specifications supplied by the glove manufacturer or others, in the context of the conditions of exposure including the duration of exposure, associated chemical substances, chemical and mechanical stresses, and potential durations of exposures.

(ii) Manufacture or processing without requiring that any container of the substance or of a formulation containing the substance be:

(A) Packaged to prevent any leakage of the substance to the environment.

(B) Labeled on the package that the substance should be handled only while using NIOSH approved respirators and impervious gloves.

(b) *Specific requirements.* The provisions of Subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* In addition to the requirements of § 721.17, manufacturers and processors of the substance identified in paragraph (a)(1) of this section must maintain the following records for five years from the date of their creation:

(i) The names of persons required to wear protective equipment in accordance with paragraph (a)(2) of this section.

(ii) The names and addresses of any person to whom the substance is sold or transferred and the dates of such sale or transfer.

(iii) Records of respirator fit tests for each person required to wear a respirator in accordance with paragraph (a)(2) of this section.

(iv) The method for determining that the gloves described in paragraph (a)(2) of this section are impervious to the substance, the date(s) of such determination, and the results of that determination.

(2) [Reserved]

(Secs. 5, 8, Pub. L. 94-469, 90 Stat. 2012 (15 U.S.C. 2604, 2607))

[49 FR 42932, Oct. 25, 1984. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.2132 Tetraglycidalamines (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substances identified generically as tetraglycidalamines (PMN P-86-500 and P-86-502) are subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63 (a)(1), (a)(3), (a)(4), (a)(5)(iv), (a)(5)(v), (a)(5) (vi), (a)(6)(i), (a)(5)(xi) and (a)(6)(ii), (b) (concentration set at 0.1 percent), and (c). The respirator required under § 721.63 (a)(5)(vi) is applicable only when the PMN substance is in the form of a dust. The respirator required under § 721.63 (a)(5)(xi) is applicable only when the PMN substance is in the form of a mist.

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e) (concentration set at 0.1 percent), (f), (g)(1)(vii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), (g)(2)(v), and (g)(5).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80 (o).

(iv) *Disposal.* Requirements as specified in § 721.85 (a)(1), (a)(2), (b)(1), (b)(2) and (c)(1), (c)(2).

(v) *Release to water.* Requirements as specified in § 721.90(a)(2)(vi), (b)(2)(vi) and (c)(2)(vi).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by th paragraph.

(1) *Recordkeeping.* The followi recordkeeping requirements are appl cable to manufacturers, importers, an processors of this substance, as spec fied in § 721.125(a) through (k).

(2) *Limitations or revocation of* ce*tain notification requirements.* Th provisions of § 721.185 apply to th significant new use rule.

(Approved by the Office of Managemen and Budget under OMB control numb 2070-0012)

[55 FR 26101, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 261 June 26, 1990, § 721.2132 was added, effe tive August 27, 1990.

§ 721.2180 Substituted thiazino hydraz salt (generic name).

(a) *Chemical substance and signi cant new uses subject to reporting.* (The chemical substance substitute thiazino hydrazine salt (PMN P-88-6 is subject to reporting under this se tion for the significant new uses d scribed in paragraph (a)(2) of this se tion.

(2) The significant new uses are:

(i) *Protection in the workplace.* R quirements as specified § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(i through (a)(5)(vii), and (a)(6)(i), ([concentration set at 0.1 percent], a (c).

(ii) *Hazard communication p gram.* Requirements as specified § 721.72(a), (b)(2), (c), (d), (e) [conc tration set at 0.1 percent], (f), a (g)(1)(iv) and (g)(1)(vii), (g)(2 (g)(2)(ii), (g)(2)(iv), and (g)(2 (g)(4)(i), and (g)(5).

(iii) *Industrial, commercial, and* co*sumer activities.* Requirements specified in § 721.80(g) and (l).

(iv) *Disposal.* Requirements as spe fied in § 721.85(a)(1) and (a)(2) a (b)(1) and (b)(2).

(b) *Specific requirements.* The pro sions of subpart A of this part apply this section except as modified by t paragraph.

(1) *Recordkeeping.* The follow recordkeeping requirements are ap cable to manufacturers, importers, processors of this substance, as sp fied in § 721.125(a) through (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26112, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26112, June 26, 1990, § 721.2180 was added, effective August 27, 1990.

§ 721.2192 Disubstituted alkyl triazines (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substances identified generically as disubstituted alkyl triazines (PMNs P-85-932 and P-85-933) are subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iv), (a)(6)(i), (b) (concentration set at 0.1 percent), and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(1), (d), (e) (concentration set at 0.1 percent), (f), (g)(1)(iv), (g)(1)(viii), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), and (g)(2)(v). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when an MSDS is not required under § 721.72(c). The provision of § 721.72(g) requiring placement of specific information on an MSDS does not apply when an MSDS is not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(g).

(iv) *Release to water.* § 721.90(a)(1), (b)(1), and (c)(1).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i) and (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26101, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26101, June 26, 1990, § 721.2192 was added, effective August 27, 1990.

§ 721.2200 Tris (2,3-dibromopropyl) phosphate.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance tris (2,3-dibromopropyl) phosphate (CAS Number 126-72-7) is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Special provisions.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[52 FR 2703, Jan. 26, 1987. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.2480 Urea, condensate with poly[oxy(methyl-1,2ethanediyl)]-α-(2-aminomethylethyl)-μ-(2-aminoethylethoxy) (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substance urea, condensate with poly[oxy(methyl-1,2-ethanediyl)]-α-(2-aminomethylethyl)-μ-(2-aminoethylethoxy) (PMN P-84-482) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(q).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance: Recordkeeping requirements specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(3) *Determining whether a specific use is subject to this section.*The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26102, June 26, 1990]

Effective Date Note: At 55 FR 26102, June 26, 1990, § 721.2480 was added, effective August 27, 1990.

§ 721.2490 Urea, (hexahydro-6-methyl-2-oxopyrimidinyl)-.

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance urea, (hexahydro-6-methyl-2oxopyrimidinyl)- (PMN P-89-303) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(p) (level set at 1,975,000 and 2,200,000 kg).

(ii) [Reserved]

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a), (b), (c), and (i).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to th significant new use rule.

(Approved by the Office of Manageme and Budget under OMB control numb 2070-0012)

[55 FR 26102, June 26, 1990]

Effective Date Note: At 55 FR 261 June 26, 1990, § 721.2490 was added, eff tive August 27, 1990.

§ 721.2500 Polyamine ureaformaldehy condensate (specific name).

(a) *Chemical substance and signi cant new uses subject to reporting.* (The chemical substance polyami ureaformaldehyde condensate (PM P-87-1456) is subject to reporti under this section for the significa new uses described in paragraph (a) of this section.

(2) The significant new uses are:

(i) *Release to water.* Requirements specified in § 721.90(a)(4) [conce level of 1 ppb], (b)(4) [concern level 1 ppb], and (c)(4) [concern level of ppb].

(ii) [Reserved]

(b) *Specific requirements.* The pro sions of subpart A of this part apply this section except as modified by t paragraph.

(1) *Recordkeeping.* The followi recordkeeping requirements are app cable to manufacturers, importers, processors of this substance, as spe fied in § 721.125(a), (b), (c), and (k).

(2) *Limitations or revocation of c tain notification requirements.* T provisions of § 721.185 apply to t significant new use rule.

(Approved by the Office of Managem and Budget under OMB control num 2070-0012)

[55 FR 26112, June 26, 1990]

Effective Date Note: At 55 FR 26 June 26, 1990, § 721.2500 was added, ef tive August 27, 1990.

§ 721.2550 Urethane.

(a) *Chemical substance and sign cant new uses subject to reporting.* The chemical substance uretha CAS Number 51-79-6, is subject to porting under this section for the nificant new uses described in pa graph (a)(2) of this section.

(2) The significant new use is: Any use.

(b) *Special provisions.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Persons who must report.* Section 721.5 applies to this section except for § 721.5(a)(2). A person who intends to manufacture, import, or process for commercial purposes the substance identified in paragraph (a)(1) of this section and intends to distribute the substance in commerce must submit a significant new use notice.

(2) [Reserved]

(Approved by the Office of Management and Budget under control number 2070-0038)

[51 FR 9453, Mar. 19, 1986. Redesignated at 53 FR 2845, Feb. 2, 1988]

§ 721.2585 3-Alkyl-2-(2-anilino)vinyl thiazolinium salt (generic name).

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substance identified generically as 3-alkyl-2-(2-anilino)vinylthiazolinium salt (PMN P-84-1007) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iii), (a)(5)(iv), (a)(5)(v), (a)(5)(vi), (a)(5)(vii), (a)(6)(i), (b) (concentration set at 1 percent), and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(a), (b)(2), (c), (d), (e), (f) [concentration set at 1 percent], (g)(1)(iii), (g)(1) (may be lethal if inhaled or in contact with eyes), (g)(2)(i), (g)(2)(ii), (g)(2)(iv), (g)(2)(v), and (g)(5). The provision of § 721.72(d) requiring that employees be provided with information on the location and availability of MSDSs does not apply when an MSDS is not required under § 721.72(c). The provision of § 721.72(g) requiring placement of specific information on an MSDS does not apply when an MSDS in not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80 (j).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (i), and (k).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[55 FR 26102, June 26, 1990]

EFFECTIVE DATE NOTE: At 55 FR 26102, June 26, 1990, § 721.2585 was added, effective August 27, 1990.

PART 723—PREMANUFACTURE NOTIFICATION EXEMPTIONS

Subpart A—[Reserved]

Subpart B—Specific Exemptions

723.50 Chemical substances manufactured in quantities of 1,000 kilograms or less per year.
723.175 Chemical substances used in or for the manufacture or processing of instant photographic and peel-apart film articles.
723.250 Polymers.

AUTHORITY: 15 U.S.C. 2604.

Subpart A—[Reserved]

Subpart B—Specific Exemptions

§ 723.50 Chemical substances manufactured in quantities of 1,000 kilograms or less per year.

(a) *Purpose and scope.* (1) This section grants an exemption from the premanufacture notice requirements of section 5(a)(1)(A) of the Toxic Substances Control Act (15 U.S.C. 2604(a)(1)(A)) for the manufacture of certain chemical substances manufactured in quantities of 1,000 kilograms or less per year.

(2) To manufacture a new chemical substance under the terms of this exemption, (i) a manufacturer must submit a notice of intent to manufacture 21 days before manufacture begins, as required under paragraph (e) of this section; and (ii) the manufacturer must comply with all other provisions of this section.

(b) *Definitions.* (1) "Act" means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq*).

(2) The terms "article," "byproduct," "EPA," "health and safety study," "importer," "impurity," "known to or reasonably ascertainable," "manufacture," "new chemical substance" "person," "possession or control," "test data" have the same meanings as in § 720.3 of this chapter.

(3) The term "Assistant Administrator" means the EPA Assistant Administrator for Pesticides and Toxic Substances or any employee designated by the Assistant Administrator to carry out the Assistant Administrator's functions under this section.

(4) The term "category of chemical substances" has the same meaning as in section 26(c)(2) of the Act (15 U.S.C. 2625(c)(2)).

(5) "Director of the Office of Toxic Substances" means the Director of the EPA Office of Toxic Substances or any EPA employee designated by the Director to carry out the Director's functions under this section.

(6) The term "environment" has the same meaning as in section 3 of the Act (15 U.S.C. 2602).

(7) "Environmental transformation product" means any chemical substance resulting from the action of environmental processes on a parent compound that changes the molecular identity of the parent compound.

(8) "Metabolite" means a chemical entity produced by one or more enzymatic or nonenzymatic reactions as a result of exposure of an organism to a chemical substance.

(9) "Serious acute effects" means human disease processes or other adverse effects that have a short latency period for development, result from short-term exposure, or are a combination of these factors and that are likely to result in death, severe or prolonged incapacitation, disfigurement, or severe or prolonged loss of the ability to use a normal bodily or intellectual function with a consequent impairment of normal activities.

(10) "Serious chronic effects" mean human disease processes or other adverse effects that have a long latenc period for development, result fro long-term exposure, are long-term illnesses, or are a combination of thes factors and that are likely to result i death, severe or prolonged incapacitation, disfigurement, or severe or prolonged loss of the ability to use normal bodily or intellectual functio with a consequent impairment o normal activities.

(11) "Significant environmental effects" means either:

(i) Any irreversible damage to biological, commercial, or agricultural resources of importance to society,

(ii) Any reversible damage to biolog cal, commercial, or agricultural resources of importance to society if th damage persists beyond a single generation of the damaged resource o beyond a single year, or

(iii) Any known or reasonably antic pated loss of members of an endangered or threatened species. "Endangered" or "threatened" species a those species identified as such by th Secretary of the Interior in accordance with the Endangered Species Ac as amended (16 U.S.C. 1531).

(12) "Site" means a contiguous property unit. Property divided only by public right-of-way shall be considere one site. There may be more than o manufacturing plant on a single site.

(c) *Exemption categories.* An person who intends to manufactu (including import) a new chemical substance in quantities of 1,000 kilogra or less per year may seek an exemption under this section for that chem cal substance, subject to the cond tions specified in paragraph (d) of th section. No more than one person ma hold an exemption for a particul new chemical substance under th paragraph.

(d) *Exclusions*—(1) *Chronic effects.* new chemical substance cannot manufactured under this section EPA determines, in accordance wit paragraph (g) of this section, that th substance or a reasonably anticipat metabolite or environmental transformation product of it may cause serious chronic effects, including carcinogenic and teratogenic effects, under anticipated conditions of manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance.

(2) *Acute effects.* A new chemical substance cannot be manufactured under this section if EPA determines, in accordance with paragraph (g) of this section, that the substance or a reasonably anticipated metabolite or environmental transformation product of it may cause serious acute effects (lethal or sublethal) under anticipated conditions of manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance.

(3) *Environmental effects.* A new chemical substance cannot be manufactured under this section if EPA determines, in accordance with paragraph (g) of this section, that the new chemical substance or a reasonably anticipated environmental transformation product of it may cause significant environmental effects under anticipated conditions of manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance.

(4) *Impurities.* A new chemical substance cannot be manufactured under this section if EPA determines, in accordance with paragraph (g) of this section, that reasonably anticipated impurities in the substance may cause serious acute or chronic effects in humans or significant environmental effects under anticipated conditions of manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance.

(5) *Byproducts.* A new chemical substance cannot be manufactured under this section if EPA determines, in accordance with paragraph (g) of this section, that the reasoanbly anticipated byproducts of manufacture, processing, distribution in commerce, use, or disposal of the substance, including waste or emissions, may cause serious acute or chronic effects in humans or significant environmental effects under anticipated conditions of manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance.

(e) *Exemption notice.* (1) The manufacturer must submit a notice to the Document Control Officer as provided in paragraph (n) of this section at least 21 days before manufacture begins. The date of submission will be the date on which the notice is received by the Document Control Officer. EPA will acknowledge the receipt of the notice by letter. The letter will identify the date on which the review period begins. The notice must include:

(i) *Manufacturer's name.* The name and address of the manufacturer of the new chemical substance and the name and telephone number of a technical contact must be provided.

(ii) *Type of exemption.* The exemption notice must indicate that the manufacturer is seeking a low volume exemption.

(iii) *Chemical identification* —(A) *Class 1 substances* (chemical substances whose composition can be represented by a definite structural diagram). The chemical name (preferably Chemical Abstract Services (CAS) or International Union of Pure and Applied Chemistry (IUPAC) nomenclature), the molecular formula, CAS Registry Number (if available), and a structural diagram.

(B) *Class 2 substances* (chemical substances that cannot be fully represented by a structural diagram). The chemical name, the molecular formula, the CAS Registry Number (if available). The notice must identify the immediate precursors and reactants by name CAS Registry Number (if possible). The notice must include a partial or incomplete structural diagram (if available). Chemical names for such substances should be developed according to the guidelines in the TSCA Chemical Substance Inventory, Initial Inventory, Volume 1.

(C) *Polymers.* Monomers and other reactants used in the manufacture of the polymer by chemical name and CAS Registry Number (if available); typical percent of each monomer and other reactants used in the polymer (by weight percent of total polymer); the maximum residual of each monomer present in the polymer; and a partial or incomplete structural diagram (if possible). The notice must provide estimates of the minimum number-average molecular weight of the polymer and the amount of low molecular weight species below 500 and below 1,000 molecular weight and describe how the estimates were obtained. This information must be provided to the extent it is known or reasonably ascertainable by the submitter.

(D) *Impurities.* Impurities anticipated to be present in the new chemical substance by name, CAS Registry Number (if known), and weight percent of the total substance. If there are unidentified impurities, the notice must include an estimate of their total weight percent. Information on impurities must be provided to the extent that it is known to or reasonably ascertainable by the submitter.

(E) *Generic name.* If the manufacturer claims the chemical identity of the new chemical substance confidential, he or she must submit a generic name in accordance with paragraph (k)(2) of this section. The name should be only as generic as necessary to protect the confidential chemical identity of the particular chemical substance. In should reveal the specific chemical indentity to the maximum extent possible.

(iv) *Description of use.* Each use for which the chemical substance would be manufactured by function and application (e.g., spray adhesive in the manufacture of laminates). The description of use must indicate whether the use is industrial, commercial, or consumer.

(v) *Site of manufacture* (except for chemical substances that are imported). The notice must state the name and address of the site or sites of manufacture of the new chemcial substance.

(vi) *Certification.* The manufacturer must certify that:

(A) The manufacturer intends to manufacture or import the new chemical substance for commercial purposes, other than in small quanitities solely for research and development, under the terms of this section.

(B) The manufacturer is familiar with the terms of this section and will comply with those terms.

(C) The new chemical substa
which the notice is submitted
all applicable exemption conditi

(vii) *Test data.* The manuf
must submit all test data in its
sion or control which are rel
the effects of the new chemic
stance on health or the environ

(viii) *Exposure controls.* The
facturer may also provide infor
on exposure controls or other c
for the new chemical sub
Where a manufacturer provide
information to support the exe
notice, the manufacturer must
tain those controls througho
period of the exemption.

(ix) *Sanitized copy of notic*
The manufacturer must ma
claims of confidentiality in acco
with paragraph (k) of this sect
any information is claimed co
tial, the manufacturer must su
second copy of the notice, with
formation claimed as confident
leted, in accordance with par
(k)(3) of this section.

(B) If the submitter does not
the second copy, the submissio
complete.

(2) *Incomplete notices.* If E
ceives a submission which does
clude all of the information re
under paragraph (e) of this
the submission will be determi
be incomplete by the Director
Office of Toxic Substances. T
emption review period will not
until EPA receives all required
mation.

(f) *Review period.* EPA will
the notice submitted under par
(e) of this section to determine
er the new chemical substance
ble for the exemption. The
period will end 21 days after rec
the notice by EPA. Upon expira
the 21-day review period, if EP
taken no action, the manufa
may begin to manufacture th
chemical substance under the
terms of this exemption.

(g) *Notice of ineligibili*
During the review period. If the
ant Administrator for Pesticide
Toxic Substances determines
the review period that the new
cal substance does not meet the
of this section, or that there are

concerning toxicity or exposure that require further review, the Assistant Administrator will notify the manufacturer by telephone that the substance is not eligible. This telephone notification will subsequently be confirmed by certified letter that identifies the issues and explains why they are unresolved. The manufacturer may not begin manufacture of the new chemical substance without complying with section 5(a)(1) of the Act.

(2) *After the review period.* (i)(A) If at any time after the end of the review period specified in paragraph (f) of this section, the Assistant Adminfstrator for Pesticides and Toxic Substances makes a preliminary determination that the new chemical substance does not meet the terms of this section, the Assistant Administrator will notify the manufacturer by certified letter that EPA believes that the new chemical substance does not meet the terms of this section.

(B) The manufacturer may continue to manufacture, process, distribute in commerce, and use the new chemical substance after receiving notice under paragraph (g)(2)(i)(A) of this section if the manufacturer was manufacturing, processing, distributing in commerce, or using the substance at the time of the notification and if the manufacturer submits objections or an explanation under paragraph (g)(2)(ii) of this section. Manufacturers not manufacturing, processing, distributing in commerce, or using the substance at the time of notification may not begin manufacture until EPA makes its final determination under paragraph (g)(2)(iii) of this section.

(ii) A manufacturer who has received notice under paragraph (g)(2)(i) of this section may submit detailed objections to the determination or an explanation of its diligence and good faith efforts in attempting to comply with the terms of this section within 15 days of receipt of written notification.

(iii) The Assistant Administrator will consider any objections or explanation submitted under paragraph (g)(2)(ii) of this section and will make a final determination. The Assistant Administrator will notify the manufacturer of the final determination by telephone within 15 days of receipt of the objections or explanation, and subsequently by certified letter.

(iv) If the Assistant Administrator determines that the new chemical substance meets the terms of this section, the manufacturer may continue or resume manufacture, processing, distribution in commerce, and use in accordance with the terms of this section.

(v) If the Assistant Administrator determines that the new chemical substance does not meet the terms of this section and that the manufacturer did not act with due diligence and in good faith to meet the terms of this section, the manufacturer must cease any continuing manufacture, processing, distribution in commerce, and use of the new chemical substance within 24 hours of the telephone notification under paragraph (g)(2)(iii) of this section. The manufacturer may not resume manufacture, processing, distribution in commerce, or use until it submits a notice under section 5(a)(1) of the Act and Part 720 of this chapter and the notice review period has ended.

(vi) If the Assistant Administrator determines that the new chemical substance does not meet the terms of this section and that the manufacturer acted with due diligence and in good faith to meet the terms of this section, the manufacturer may continue manufacture, processing, distribution in commerce, and use of the new chemical substance if:

(A) It was actually manufacturing, processing, distributing in commerce, or using the chemical substance at the time it received the notification specified in paragraph (g)(2)(i) of this section, and

(B) It submits a notice on the new chemical substance under section 5(a)(1) of the Act and Part 720 of this chapter within 15 days of receipt of the telephone notification under paragraph (g)(2)(iii) of this section. Such manufacture, processing, distribution in commerce, and use may continue unless EPA takes action under section 5(e) or 5(f) of the Act.

(3) Action under this paragraph does not preclude action under sections 7, 15, 16, and 17 of the Act.

(h) *Additional information.* If the manufacturer of a new chemical substance under the terms of this exemption obtains test data or other information indicating that the new chemical substance may not qualify for the exemption, the manufacturer must submit these data or information to EPA within 15 working days of receipt of the information.

(i) *Changes in site or use.* (1) Chemical substances manufactured under this section must be manufactured at the site or sites described and for the uses described in the exemption notice submitted in accordance with paragraph (e) of this section.

(2)(i) Any person who manufactures a new chemical substance described in paragraph (c) of this section must comply with the provisions of this section before manufacturing the new chemical substance at a site that was not reported in a previous exemption notice, including submission of a new notice under paragraph (e) of this section.

(ii) Any person who manufactures a new chemical substance described in paragraph (c) of this section must comply with the provisions of this section before manufacturing the new chemical substance for a use that was not reported in a previous exemption notice, including submission of a new notice under paragraph (e) of this section.

(3) In an exemption notice informing EPA of a change in site or use, the manufacturer is not required to provide information submitted to EPA in a previous exemption notice on that chemical substance. The new exemption notice, however, must indicate the identity of the new chemical substance; the manufacturer's name; the name and telephone number of a technical contact; and the new site or use. The notice must also include a certification by the manufacturer, as described in paragraph (e)(1)(vi) of this section.

(j) *Customer notification.* (1) Manufacturers of a new chemical substance described in paragraph (c) of this section must notify processors and industrial users that the substance can be used only for the uses specified in the exemption notice. The manufacturer must also inform processors and industrial users of any controls specified in the exemption notice. The manufacturer may notify processors and industrial users by means of a container labeling system, written notification, or any other method that adequately informs them of use restrictions or controls.

(2) If the manufacturer learns that a customer is processing or using the exempt substance in violation of use restrictions or without imposing prescribed controls, the manufacturer must cease distribution of the substance to the customer immediately. The manufacturer must also report this action to EPA within 15 days under paragraph (h) of this section.

(k) *Confidentiality.* (1) If the manufacturer submits to EPA under this section information which it claims to be confidential business information, the manufacturer must clearly identify the information at the time of submission to EPA by bracketing, circling, or underlining it and stamping it with "CONFIDENTIAL" or some other appropriate designation. Any information so identified will be treated in accordance with the procedures in Part 2 of this Title. Any information not claimed confidential at the time of submission may be made available to the public without further notice.

(2)(i) Any person who asserts a claim of confidentiality for chemical identity under this paragraph must provide a generic chemical name that is only as generic as necessary to protect the confidential chemical identity of the particular chemical substance. The name should reveal the specific chemical identity to the maximum extent possible.

(ii) The generic name provided by the submitter will be subject to EPA review and approval in accordance with the procedures specified in § 720.85(b)(6) of this chapter. The generic name provided by the submitter or an alternative selected by EPA under these procedures will be placed on a public list of substances exempt under this section.

(3) If any information is claimed confidential, the manufacturer must submit a second copy of the notice except that all information claimed as

confidential in the first copy must be deleted. EPA will place the second copy in the public file.

(l) *Determination of first manufacturer of a new chemical substance.* (1) A person who intends to manufacture a new chemical substance under this section may determine whether that particular substance is already being manufactured under that section and, therefore, whether the person is eligible for the exemption, by submitting a notice on the substance under paragraph (e) of this section. EPA will inform the manufacturer within the 21-day review period if the manufacturer is not eligible for the exemption because another person is already manufacturing the substance under the exemption.

(2) Alternatively, the manufacturer may ask EPA whether another manufacturer is already producing the new chemical substance under this section. EPA will respond to this inquiry only if EPA determines that the manufacturer making the inquiry has shown a *bona fide* intent to manufacture the substance under the terms of this section.

(i) To establish a *bona fide* intent to manufacture a substance under this section, the manufacturer must submit to EPA:

(A) The specific chemical identity of the substance that the person intends to manufacture.

(B) A signed statement that the person intends to manufacture that chemical substance under the terms of this section.

(C) A description of the research and development activities conducted to date, and the purpose for which the person will manufacture the chemical substance.

(D) An elemental analysis.

(E) Either an X-ray diffraction pattern (for inorganic substances), a mass spectrum (for most other substances), or an infrared spectrum of the particular chemical substance, or if such data do not resolve uncertainties with respect to the identity of the chemical substance, additional or alternative spectra or other data to identify the substance.

(ii) If an importer cannot provide all the information required by paragraph (l)(2)(i) of this section because it is claimed confidential business information by its foreign manufacturer or supplier, the foreign manufacturer or supplier may supply the information directly to EPA.

(iii) The Director of the Office of Toxic Substances will promptly examine the manufacturer's submission.

(A) If the Director determines that the manufacturer has not shown a *bona fide* intent to manufacture the new substance under the terms of this section, the Director will promptly notify the manufacturer. The manufacturer may then submit a notice under paragraph (e) of this section or a notice under section 5(a)(1) of the Act.

(B) If the Director determines that the manufacturer has shown a *bona fide* intent to manufacture the new chemical substance under the terms of this section, the Director will promptly inform the manufacturer whether the substance is being manufactured under this section. If the substance is not being manufactured under this section, the manufacturer may submit a notice under paragraph (e) of this section. If the new chemical substance is being manufactured under this section, the manufacturer must submit a notice under section 5(a)(1) of the Act.

(m) *Volume limitation.* A person manufacturing a new chemical substance under this section may not manufacture more than 1,000 kg of the substance during each 12-month period following the date the review period described in paragraph (f) of this section expires.

(n) *Submission of information.* Information submitted to EPA under this section must be sent in writing to: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(o) *Recordkeeping.* (1) Each manufacturer of a new chemical substance described in paragraph (c) of this section must maintain records of (i) the annual production volume of the new chemical substance under the exemption, and (ii) documentation of information in the exemption notice and compliance with the terms of this section. Records maintained under this paragraph must be retained for 5 years after date of their preparation.

(2) Any person who manufactures a new chemical substance under the terms of this section must, upon request of a duly designated representative of EPA permit such person at all reasonable times to have access to and to copy records kept under paragraph (o)(1) of this section.

(3) The manufacturer must submit the records listed in paragraph (o)(1) of this section to EPA upon written request by the Director of the Office of Toxic Substances. Manufacturers must provide these records within 15 working days of receipt of this request.

(p) *Compliance.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) Submitting materially misleading or false information in connection with the requirements of any provision of this section is a violation of this section and therefore a violation of section 15 of the Act (15 U.S.C. 2614).

(3) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C 2615) for each violation.

(4) EPA may seek to enjoin the manufacture or processing of a chemical substance in violation of this section, or act to seize any chemical substance manufactured or processed in violation of this section, or take other actions under the authority of section 7 of the Act (15 U.S.C. 2606) or section 17 of the Act (15 U.S.C. 2616)).

(Approved by the Office of Management and Budget under control number 2070-0012)

[50 FR 16488, Apr. 26, 1985, as amended at 53 FR 12523, Apr. 15, 1988]

§ 723.175 Chemical substances used in or for the manufacture or processing of instant photographic and peel-apart film articles.

(a) *Purpose and scope.* (1) This section grants an exemption from the premanufacture notice requirements of section 5(a)(1)(A) of the Toxic Substances Control Act (15 U.S.C. 2604(a)(1)(A)) for the manufacture and processing of new chemical substances used in or for the manufacture or processing of instant photographic and peel-apart film articles.

(2) To manufacture a new chemical substance under the terms of this exemption, a manufacturer of instant photographic or peel-apart film articles must:

(i) Submit an exemption notice when manufacture begins under paragraph (i) of this section.

(ii) Comply with certain requirements to limit exposure to the new chemical substance under paragraphs (e), (f), (g), and (h) of this section.

(iii) Comply with all recordkeeping requirements under paragraph (j) of this section.

(b) *Definitions.* (1) "Act" means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

(2) An "article" is a manufactured item (i) which is formed to a specific shape or design during manufacture, (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (iii) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article and that may occur as described in § 710.2 of this chapter except that fluids and particles are not considered articles regardless of shape or design.

(3) The term "byproduct," "EPA," "impurities," "person," and "site" have the same meanings as in § 710.2 of this chapter.

(4) The term "category of chemical substances" has the same meaning as in section 26(c)(2) of the Act (15 U.S.C. 2625).

(5) The terms "chemical substance," "distribute in commerce," "distribution in commerce," "environment," "manufacture," "new chemical substance," and "process" have the same meanings as in section 3 of the Act (15 U.S.C. 2602).

(6) "Director of the Office of Toxic Substances" means the Director of the EPA Office of Toxic Substances or any EPA employee designated by the Office Director to carry out the Office Director's functions under this section.

(7) The term "exemption category" ieans a category of chemical sub- tances for which a person(s) has ap- lied for or been granted an exemp- ion under section 5(h)(4) of the Act 15 U.S.C. 2604).

(8) The term "instant photographic ilm article" means a self-developing hotographic film article designed so hat all the chemical substances con- ained in the article, including the hemical substances required to proc- ss the film, remain sealed during dis- ribution and use.

(9) "Intermediate" means any chem- cal substance which is consumed in vhole or in part in a chemical eaction(s) used for the intentional nanufacture of another chemical sub- tance.

(10) "Known to or reasonably ascer- ainable" means all information in a erson's possession or control, plus all nformation that a reasonable person imilarly situated might be expected o possess, control, or know, our could btain without unreasonable burden r cost.

(11) The term "peel-apart film arti- cle" means a self-developing photo- graphic film article consisting of a positive image receiving sheet, a light sensitive negative sheet, and a sealed reagent pod containing a developer re- agent and designed so that all the chemical substances required to devel- op or process the film will not remain sealed within the article during and after the development of the film.

(12) "Photographic article" means any article which will become a component of an instant photographic or peel-apart film article.

(13) "Special production area" means a demarcated area within which all manufacturing, processing, and use of a new chemical substance takes place, except as provided in paragraph (f) of this section, in accordance with the requirements of paragraph (e) of this section.

(14) "Test data" means:

(i) Data from a formal or informal study, test, experiment, recorded observation, monitoring, or measurement.

(ii) Information concerning the objectives, experimental methods and materials, protocols, results, data analyses (including risk assessments), and conclusions from a study, test, experiment, recorded observation, monitoring, or measurement.

(15) "Used in or for the manufacturing or processing of an instant photographic or peel-apart film article," when used to describe activities involving a new chemical substance, means the new chemical substance (i) is included in the article, or (ii) is an intermediate to a chemical substance included in the article or is one of a series of intermediates used to manufacture a chemical substance included in the article.

(16) "Wet mixture" means a water or organic solvent-based suspension, solution, dispersion, or emulsion used in the manufacture of an instant photographic or peel-apart film article.

(c) *Exemption category.* The exemption category includes new chemical substances used in or for the manufacture or processing of instant photographic or peel-apart film articles which are manufactured and processed under the terms of this section.

(d) *Applicability.* This exemption applies only to manufacturers of instant photographic or peel-apart film articles who:

(1) Manufacture the new chemical substances used in or for the manufacture or processing of the instant photographic or peel-apart film articles.

(2) Limit manufacture and processing of a new chemical substance to the site(s) listed in the exemption notice for that new chemical substance submitted under paragraph (i) of this section.

(3) Comply with the requirements of paragraphs (e), (f), (g), (h), and (j) of this section.

(4) Do not distribute in commerce or use a peel-apart film article containing a new chemical substance until submission of a premanufacture notice under section 5(a)(1)(A) of the Act (15 U.S.C. 2604) and until the review period for the notice has ended without EPA action to prevent distribution or use.

(e) *Conditions of manufacture and processing in the special production area.* All manufacturing, processing, and use operations involving the new chemical substance must be performed in a special production area under the conditions set forth in this paragraph until the new chemical substance has been incorporated into a wet mixture, photographic article, or instant photographic or peel-apart film article.

(1) *Exposure limits.* In the special production area, the ambient air concentration of the new chemical substance during manufacture, processing, and use cannot exceed an 8-hour time weighted average (TWA) of 10 ppm for gases and vapors and 50 $\mu g/m^3$ for particulates, with an allowable TWA excursion of 50 percent above those concentrations for a duration of 30 minutes or less.

(2) *Respiratory protection*—(i) *Respirator requirement.* Except as specified in paragraph (e)(2)(ii) of this section, each person in the special production area must wear an appropriate respiratory protection device to protect against dusts, fumes, vapors, and other airborne contaminants, as described in 29 CFR 1910.134. Selection of an appropriate respirator must be made according to the guidance of American National Standard Practices for Respiratory Protection Z88.2-1969 and the NIOSH Certified Equipment List, U.S. Department of Health and Human Services, NIOSH publication No. 80-144.

(ii) *Waiver of respirator requirement.* Employees are not required to wear respirators if monitoring information collected and analyzed in accordance with paragraph (e)(3) of this section demonstrates that the ambient 8-hour TWA concentration of the new chemical substance in the area is less than 1 ppm for gases and vapors and 5 $\mu g/m^3$ for particulates with an allowable TWA excursion of 50 percent above these concentrations for a duration of 30 minutes or less.

(iii) *Quantitative fit test.* Each respirator must be issued to a specific individual for personal use. A quantitative fit test must be performed for each respirator before its first use by that person in a special production area.

(3) *Monitoring*—(i) *When to monitor.* (A) When suitable sampling and analytic methods exist, periodic monitoring in accordance with this paragraph must be done to ensure compliance with the exposure limits of paragraphs (e)(1) and (2)(ii) of this section.

(B) When suitable sampling and analytic methods do not exist, compliance with the exposure limits of paragraph (e)(1) and the requirements of paragraph (e)(10) of this section must be determined by an evaluation of monitoring data developed for a surrogate chemical substance possessing comparable physical-chemical properties under similar manufacturing and processing conditions.

(ii) *Monitoring methods.* A suitable air sampling method must permit personal or fixed location sampling by conventional collection methods. A suitable analytic method must have adequate sensitivity for the volume of sample available and be specific for the new chemical substance being monitored. If chemical-specific monitoring methods are not available, nonspecific methods may be used if the concentration of the new chemical substance is assumed to be the total concentration of chemical substances monitored.

(iii) *Monitoring frequency.* (A) When suitable air sampling and analytical procedures are available, monitoring must be done in each special production area during the first three 8-hour work shifts involving the manufacture or processing of each new chemical substance. Thereafter, monitoring must be done in each special production area for at least one 8-hour period per month, during a production run in which the new chemical substance is manufactured or processed. Samples must be of such frequency and pattern as to represent with reasonable accuracy the mean level and maximum 30-minute level of employee exposure during an 8-hour work shift. In monitoring for an 8-hour work shift or the equivalent, samples must be collected periodically or continuously for the duration of the 8-hour work shift. Samples must be taken during a period which is likely to represent the maximum employee exposure.

(B) If the manufacturer demonstrates compliance with the exposure limits for 3 consecutive months, further monitoring of the identical process must be performed only every 6 months thereafter, unless there is a

ificant change in the process, proc-
design, or equipment. If there is
a change, the manufacturer must
in monitoring again according to
schedule in paragraph
3)(iii)(A) of this section.

v) *Location of monitoring.* Air sam-
must be taken so as to ensure that
samples adequately represent the
bient air concentration of a new
mical substance present in each
ker's breathing zone.

) *Engineering controls and expo-
e safeguards.* Engineering controls
h as, but not limited to, isolation,
losure, local exhaust ventilation,
dust collection must be used to
ure compliance with the exposure
its prescribed in paragraphs (e)(1)
(e)(2)(ii) of this section.

5) *Training, hygiene, and work
ctices*—(i) *Training.* No employee
y enter a special production area
ore the completion of a training
gram. The training program must
adapted to the individual circum-
nces of the manufacturer and must
dress: The known physical-chemical
d toxicological properties of the
emical substances handled in the
ea; procedures for using and main-
ning respirators and other personal
feguards; applicable principles of hy-
ene; special handling procedures de-
ned to limit personal exposure to,
d inadvertent release of, chemical
bstances; and procedures for re-
onding to emergencies or spills.

(ii) *Hygiene.* Appropriate standards
hygiene must be observed by all em-
oyees handling a new chemical sub-
ance in manufacturing, processing,
transfer operations. The manufac-
rer must provide appropriate facili-
s for employee changing and wash-
. Food, beverages, tobacco products,
d cosmetics must not be allowed in
ecial production areas.

(iii) *Work practices.* Operating pro-
dures such as those related to chem-
al weighing and filtering, or the
arging, discharging and clean-up of
ocess equipment, must be designed
d conducted to ensure compliance
ith the exposure limits prescribed in
aragraph (e)(1) or (e)(2)(ii) of this
ction. Written procedures and all
aterials necessary for responding to
mergency situations must be immediately accessible to all employees in a special production area. Any spill or unanticipated emission must be controlled by specially trained personnel using the equipment and protective clothing described in paragraph (e)(6) of this section.

(6) *Personal protection devices.* All workers engaged in the manufacture and processing of a new chemical substance in the special production area must wear suitable protective clothing or equipment, such as chemical-resistant coveralls, protective eyewear, and gloves.

(7) *Caution signs.* Each special production area must be clearly posted with signs identifying the area as a special production area where new chemical substances are manufactured and processed under controlled conditions. Each sign must clearly restrict entry into the special production area to qualified personnel who are properly trained and equipped with appropriate personal exposure safeguards.

(8) *Removal for storage or transportation.* A new chemical substance that is not incorporated into a wet mixture, photographic article, or instant photographic or peel-apart film article may be removed from the special production area for purposes of storage between operational steps or for purposes of transportation to another special production area. Such storage or transportation must be conducted in a manner that limits worker and environmental exposure through the use of engineering controls, training, hygiene, work practices, and personal protective devices appropriate to the chemical substance in question.

(9) *Labeling.* (i) Any new chemical substance removed from a special production area or stored or transported between operational steps must be clearly labeled. The label must show the identity of the new chemical substance or an appropriate identification code, a statement of any known hazards associated with it, a list of special handling instructions, first aid information, spill control directions, and where applicable, the appropriate U.S. Department of Transportation notations.

(ii) No label is required if the new chemical substance has been incorporated into a photographic article, or if it is contained in a sealed reaction vessel or pipeline, or if it has been incorporated into an instant photographic or peel-apart film article.

(10) *Areas immediately adjacent to the special production area.* The ambient air concentration of the new chemical substance in areas immediately adjacent to the special production area must not exceed the exposure limit established in paragraph (e)(2)(ii) of this section for waiver of respirator protection within the special production area. Periodic monitoring in accordance with paragraph (e)(3) of this section must be performed in immediately adjacent areas where it is reasonable to expect a risk of inhalation exposure.

(f) *Conditions of processing outside the special production area.* A wet mixture may be incorporated into a photographic article or an instant photographic or peel-apart film article outside the special production area under the conditions listed in this paragraph:

(1) *Engineering controls and exposure safeguards.* Engineering controls must limit the exposure to a new chemical substance contained in a wet mixture.

(2) *Training, hygiene and work practices*—(i) *Training.* Training of employees involved in the handling of wet mixtures containing a new chemical substance must be adapted to the individual circumstances of the employees' activities and must address: Procedures for using personal exposure safeguards, applicable principles of hygiene, handling procedures designed to limit personal exposure, and procedures for responding to emergencies and spills.

(ii) *Hygiene.* Appropriate standards of hygiene that limit exposure must be observed by all employees handling wet mixtures that contain new chemical substances.

(iii) *Work practices.* Work practices and operating procedures must be designed to limit exposure to any new chemical substance contained in wet mixtures. Any spills or unanticipated releases of a wet mixture must be controlled by trained personnel wearing appropriate protective clothing or
equipment such as gloves, eye
tion, and, where necessary, resp
or chemically imprevious clothin

(3) *Personal protection devic*
workers engaged in the processin
wet mixture containing a new
cal substance must wear suitab
tective clothing or equipment s
coveralls, protective eyewear, r
tors, and gloves.

(g) *Incorporation of photog*
articles into instant photograph
peel-apart film articles. A photo
ic article may be incorporated in
instant photographic or peel
film article outside the special p
tion area. The manufacturer
take measures to limit worker a
vironmental exposure to new ch
substances during these oper
using engineering controls, tr
hygiene, work practices, and pe
protective devices.

(h) *Environmental release and*
treatment—(1) *Release to land.* F
waste from manufacturing and
essing operations in the specia
duction area that contain a new
ical substance are considered
hazardous waste and must be ha
in accordance with the require
of Parts 262 through 267 and
122 and 124 of this chapter.

(2) *Release to water.* All waste
or discharge which contain th
chemcial subtance must be app
ately pretreated before release
Publicly Owned Treatment
(POTW) or other receiving bo
water. In the case of release
POTW, the pretreatment mus
vent structural damage to, obstr
of, or interference with the ope
of the POTW. The treatment of
release to a receiving body of
must be appropriate for the
chemical substance's physical-
cal properties and potential toxic

(3) *Release to air.* All process
sions released to the air which c
the new chemical substance m
vented through control devices
priate for the new chemical
stance's physical-chemical prop
and potential toxicity.

(i) *Exemption notice.* An exem
notices must be submitted to
when manufacture of the new
cal substance begins.

(1) *Contents of exemption notice.* The exemption notice must include the following information:

(i) *Manufacturer and sites.* The notice must identify the manufacturer and the sites and locations where the new chemical substance and the instant photographic or peel-apart film articles will be manufactured and processed.

(ii) *Chemical identification.* The notice must identify the new chemical substance as follows:

(A) *Class 1 substances.* For chemical substances whose composition can be represented by a definite structural diagram (Class 1 substances), the notice must provide the chemical name (preferably CAS or IUPAC nomenclature), the molecular formula, CAS Registry Number (if available), known synonyms (including trade names), and a structural diagram.

(B) *Class 2 substances.* For chemical substances that cannot be fully represented by a structural diagram, (Class 2 substances), the notice must provide the chemical name, the molecular formula, the CAS Registry Number (if available), and known synonyms (including trade names). The notice must identify the immediate precursors and reactants by name and CAS Registry Number (if available). The notice must include a partial or incomplete structural diagram, if available.

(C) *Polymers.* For a polymer, the notice must indentify monomers and other reactants used in the manufacture of the polymer by chemical name and CAS Registry Number. The notice must indicate the amount of each monomer used (by weight percent of total monomer); the maximum residual of each monomer present in the polymer; and a partial or incomplete structural diagram, if available. The notice must indicate the number average molecular weight of the polymer and characterize the anticipated low molecular weight species. The notice must include this information for each typical average molecular weight composition of the polymer to be manufactured.

(iii) *Impurities.* The notice must identify the impurities that can be reasonably anticipated to be present in the new chemcial substance when manufactured under the exemption by name and CAS Registry Number, by class of substances, or by process or source. The notice also must estimate the maximum percent (by weight) of each impurity in the new chemical substance and the percent of unknown impurities present.

(iv) *Physical-chemical properties.* The notice must desribe the physical-chemical properties of the new chemical substance. Where specific physical-chemcial data are not available, reasonable estimates and the techniques used to develop these estimates must be provided.

(v) *Byproducts.* The notice must identify the name, CAS Registry number (if available), and the volume of each byproduct that would be manufactured during manufacture of the new chemical substance.

(vi) *Production volume.* The notice must include an estimate of the anticipated maximum annual production volume.

(vii) *Test data.* The notice must include all information and test data on the new chemical substance's health and environmental effects that are known to or reasonably ascertainable by the manufacturer.

(viii) *Identity of the article.* The notice must identify and describe the instant photographic film article(s) or peel-apart film article(s) that will contain the new chemical substance.

(ix) *Release to water.* The notice must include a description of the methods used to control and treat wastewater or discharge released to a POTW or other receiving body of water. The notice must also identify the POTW or receiving body of water.

(x) *Certification.* The manufacturer must certify in the notice that it is familiar with the terms of the exemption and that the manufacture, processing, distribution, use, and disposal of the new chemical substance will comply with those terms.

(2) *Duplication of information in premanufacture notice.* If a manufacturer who submits an exemption notice under this paragraph has already submitted, or simultaneously submits, a premanufacture notice under section 5(a)(1)(A) of the Act for the new chemical substance, it may, in

lieu of submitting the information required by this paragraph, reference the required information to the extent it is included in the premanufacture notice. At a minimum, the exemption notice must identify the manufacturer and the new chemical substance, and contain the certification required by paragraph (i)(1)(x) of this section.

(3) *Address.* The exemption notice must be addressed to: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(j) *Recordkeeping.* (1) Manufacturers of a new chemical substance under this exemption must keep the following records for 30 years from the final date of manufacture.

(i) *Production records.* Each manufacturer must maintain records of the annual production volume of each new chemical substance manufactured under the terms of the exemption. This record must indicate when manufacture of the new chemical substance began.

(ii) *Exposure monitoring records.* Manufacturers must maintain an accurate record of all monitoring required by this section. Monitoring records may be adapted to the individual circumstances of the manufacturer but, at a minimum, must contain the following information: The chemical identity of the new chemical substance, date of the monitoring, the actual monitoring data for each monitoring location and sampling, and a reference to or description of the collection and analytic techniques. If the manufacturer does not monitor, the manufacturer must maintain a record of the reasons for not monitoring and the methods used to determine compliance with the exposure limits of paragraph (e)(1) of this section.

(iii) *Training and exposure records.* For each employee engaged in the manufacture or processing of a new chemical substance, the company must develop and maintain a record of the worker's participation in required training. This record must also demonstrate the regular use of personal exposure safeguards, including the results of any personal exposure monitoring, the results of the quantitative fit test for the worker's personal res rator, and any additional informatio related to the worker's occupation exposure.

(iv) *Treatment records.* Manufactu ers who release treated wastewater discharge containing a new chemic substance to a POTW or other recei ing body of water must maintai records of the method of treatment.

(2) The manufacturer must mai the records listed in paragraph (j)(of this section available to EPA upo written request by the Director of th Office of Toxic Substances. The ma ufacturer must provide these recor within 15 working days of receipt this request.

(k) *Confidentiality.* If the manufa turer submits information under par graph (i) or (j) of this section which claims to be confidential business formation, the manufacturer mu clearly identify the information at t time of submission to the Agency bracketing, circling, or underlining and stamping it with "CONFIDE TIAL" or some other appropriate de ignation. Any information so ident fied will be treated in accordance wi the procedures in Part 2 of this cha ter. Any information not claimed co fidential at the time of submission w be made available to the public wit out further notice to the submitter.

(l) *Amendment and repeal.* (1) EP may amend or repeal any term of th exemption if it determines that t manufacture, processing, distributio use, and disposal of new chemical su stances under the terms of the exem tion may present an unreasonable ri of injury to health or the enviro ment. EPA also may amend this e emption to enlarge the exemption ca egory or to reduce the restrictions conditions of the exemption.

(2) As required by section 5(h)(4) the Act, EPA will amend or repeal t substantive terms of an exempti granted under this part only by t formal rulemaking procedures d scribed in section 6(c)(2) and (3) of t Act (15 U.S.C. 2605(c)).

(m) *Prohibition of use of the exem tion.* The Director of the Office Toxic Substances may prohibit t manufacture, processing, distributio use, or disposal of any new chemic substance under the terms of this exemption if he or she determines that the manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance may present an unreasonable risk of injury to health or the environment.

(n) *Enforcement.* (1) A failure to comply with any provision of this part is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) Submitting materially misleading or false information in connection with the requirements of any provision of this part is a violation of this regulation and therefore a violation of section 15 of the Act (15 U.S.C. 2614).

(3) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation.

(4) EPA may seek to enjoin the manufacture of a new chemical substance in violation of this exemption or act to seize any chemical substances manufactured in violation of the exemption under the authority of section 17 of the Act (15 U.S.C. 2616).

[47 FR 24317, June 4, 1982, as amended at 53 FR 12523, Apr. 15, 1988]

§ 723.250 Polymers.

(a) *Purpose and scope.* (1) This section grants an exemption from certain of the premanufacture notice requirements of section 5(a)(1)(A) of the Toxic Substances Control Act (15 U.S.C. 2604(a)(1)(A)) for the manufacture of certain polymers.

(2) To manufacture a new chemical substance under the terms of this section, a manufacturer must: (i) Determine that the substance meets the definition of polymer in paragraph (b)(12) of this section.

(ii) Determine that the substance is not specifically excluded by paragraph (d) of this section.

(iii) Ensure that the substance meets the exemption criteria of paragraph (e) of this section.

(iv) Submit a notice as required under paragraph (f) of this section.

(v) Comply with the recordkeeping requirements of paragraph (r) of this section.

(b) *Definitions.* In addition to the definitions under section 3 of TSCA, 15 U.S.C. 2602, the following definitions apply to this part.

(1) "Act" means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

(2) "Administrator" and "environment," have the same meanings as in section 3 of the Act (15 U.S.C. 2602).

(3) "Biopolymer" means a polymer directly produced by living or once-living cells or cellular components.

(4) "Category of chemical substances" has the same meaning as in section 26(c)(2) of the Act (15 U.S.C. 2625).

(5) "Cationic polymer" means a polymer that contains one or more covalently linked subunits that bear a net positive charge.

(6) "Chemical substance," "Director," "EPA," "importer," "impurity," "Inventory," "known to or reasonably ascertainable," "manufacture," "manufacturer," "mixture," "new chemical substance," "person," "possession or control," "process," and "test data" have the same meanings as in § 720.3 of this chapter.

(7) "Internal subunit" means a subunit that is covalently linked to at least two other subunits. "Internal subunits" of polymer molecules are chemically derived from monomer molecules that have formed covalent links between two or more other subunits.

(8) "Monomer" means a chemical substance that has the capacity to form links between two or more other molecules.

(9) "Number-average molecular weight" means the arithmetic average (mean) of the molecular weight of all molecules in a polymer.

(10) "Polyester" means a chemical substance that meets the definition of polymer and whose polymer molecules contain at least two carboxylic acid ester linkages, at least one of which links internal subunits together.

(11) "Polymer" means a chemical substance that consists of at least a simple weight majority of polymer molecules but consists of less than a simple weight majority of molecules with the same molecular weight. Collectively, such polymer molecules must be distributed over a range of molecular weights wherein differences

in molecular weight are primarily attributable to differences in the number of internal subunits.

(12) "Polymer molecule" means a molecule which includes at least four covalently linked subunits, at least two of which are internal subunits.

(13) "Reactive functional group" means an atom or associated group of atoms in a chemical substance that is intended or can reasonably be anticipated to undergo facile chemical reaction.

(14) "Reactant" means a chemical substance that is used intentionally in the manufacture of a polymer to become chemically a part of the polymer composition.

(15) "Reasonably anticipated" means that a knowledgeable person would expect a given physical or chemical composition or characteristic to occur based on such factors as the nature of the precursors used to manufacture the polymer, the type of reaction, the type of manufacturing process, the products produced in polymerization, the intended uses of the substance, or associated use conditions.

(16) "Subunit" means an atom or group of associated atoms chemically derived from corresponding reactants.

(c) *Applicability.* This section applies to manufacturers of new chemical substances that otherwise must submit a premanufacture notice to EPA under § 720.22 of this chapter. New substances are eligible for exemption under this section if they meet the definition of polymer in paragraph (b)(11) of this section, and the criteria in paragraph (e) of this section, and if they are not excluded from the exemption under paragraph (d) of this section.

(d) *Polymers that cannot be manufactured under this section*—(1) *Cationic polymers.* A polymer cannot be manufactured under this section if the polymer is a cationic polymer as defined under paragraph (b)(5) of this section or if the polymer is reasonably anticipated to become a cationic polymer in a natural aquatic environment (e.g., rivers, lakes).

(2) *Polymers containing less than 32.0 percent carbon.* A polymer cannot be manufactured under this section if
the polymer contains less than 32
percent by weight of the atomic el
ment carbon.

(3) *Elemental limitations.* (i) A pol
mer manufactured under this sectio
must contain as an integral part of i
composition at least two of the atom
elements carbon, hydrogen, nitroge
oxygen, silicon, and sulfur.

(ii) A polymer cannot be manufa
tured under this section if it contai
as an integral part of its compositio
except as impurities, any elemen
other than the following:

(A) The elements listed in paragrap
(d)(3)(i) of this section;

(B) Sodium, magnesium, aluminu
potassium, or calcium as the mon
tomic counterions Na^{+}, Mg^{+2}, Al^{+3}, K
or Ca^{+2};

(C) Less than 0.20 weight percent
any combination of the atomic el
ments lithium, boron, phosphorus,
tanium, manganese, iron, nick
copper, zinc, tin, and zirconium.

(4) *Biopolymers.* A polymer cann
be manufactured under this section
the polymer is:

(i) A biopolymer as defined und
paragraph (b)(3) of this section.

(ii) The synthetic equivalent of
biopolymer.

(iii) A derivative or a modification
a biopolymer if the initial biopolym
is substantially intact. A derivative
a biopolymer is a polymer that resul
from an additive chemical change of
biopolymer. A modification of a biop
lymer is a polymer that results from
non-additive chemical change of a bi
polymer. A derivative or a modific
tion of biopolymer is substantial
intact if it contains two or more inte
nal subunits of a biopolymer in i
structure.

(5) *Polymers manufactured fro*
reactants containing halogen atoms
cyano groups. A polymer cannot
manufactured under this section:

(i) If the polymer is manufactur
from reactants containing, other th
as impurities, fluorine, chlorine, br
mine, or iodine atoms or cyano grou
or

(ii) If the polymer contains cya
groups other than as impurities.

(6) *Polymers containing reacti*
functional groups. A polymer cann
be manufactured under this section

the polymer contains reactive functional groups that are intended or reasonably anticipated to undergo further reaction unless:

(i) The weight of the polymer that is equivalent to one gram-formula weight of reactive functional groups is 10,000 grams or greater.

(ii) The reactive functional groups are carboxylic acid groups, aliphatic hydroxyl groups, unconjugated olefinic groups, butenedioic acid groups; or conjugated olefinic groups in naturally-occurring fats, naturally-occurring oils, or naturally-occurring carboxylic acids.

(7) *Polymers which degrade, decompose, or depolymerize.* A polymer cannot be manufactured under this section if the polymer is designed or reasonably anticipated to substantially degrade, decompose, or depolymerize.

(e) *Exemption criteria.* To be manufactured under this section, the polymer must meet one of the following criteria:

(1) *Polymers over 1,000 number-average molecular weight.* The polymer has a number-average molecular weight greater than 1000.

(2) *Polyester polymers.* The polymer is a polyester as defined in paragraph (b)(10) of this section and is manufactured solely from one or more of the reactants in the following table:

TABLE—LIST OF REACTANTS FROM WHICH POLYESTERS MAY BE MADE

Monobasic Acids and Natural Oils

Benzoic acid (65-85-0)
Coconut oil (8001-31-8*)
Corn oil (8001-30-7*)
Cottonseed oil (8001-29-4*)
Dodecanoic acid (143-07-7)
Fatty acids, coco (61788-47-4*)
Fatty acids, linseed oil (68424-45-3*)
Fatty acids, safflower oil**
Fatty acids, soya (68308-53-2*)
Fatty acids, sunflower oil** (84625-38-7*)
Fatty acids, tall-oil (61790-12-3*)
Fatty acids, tall-oil conjugated**
Fatty acids, vegetable oil (61788-66-7*)
Heptanoic acid (111-14-8)
Hexanoic acid (142-62-1)
Hexanoic acid, 3,3,5-trimethyl- (3302-10-1)
Linseed oil (8001-26-1*)
Nonanoic acid (112-05-0)
Oils, *Cannabis*
Oils, anchovy
Oils, babassu palm
Oils, herring (68153-06-0*)
Oils, menhaden (8002-50-4*)
Oils, oiticica (8016-35-1*)
Oils, palm kernel (8023-79-8*)
Oils, perilla (68132-21-8*)
Oils, walnut (8024-09-7*)
Oils, sardine
Safflower oil (8001-23-8*)
Soybean oil (8001-22-7*)
Sunflower oil (8001-21-6*)
Tung oil (8001-20-5*)

Di and Tri Basic Acids and Anhydrides

1,2-Benzenedicarboxylic acid (88-99-3)
1,3-Benzenedicarboxylic acid (121-91-5)
1,4-Benzenedicarboxylic acid (100-21-0)
1,2,4-Benzenetricarboxylic acid (528-44-9)
Butanedioic acid (110-15-6)
2-Butenedioic acid (*E*) (110-17-8)
Decanedioic acid (111-20-6)
Hexanedioic acid (124-04-9)
Nonanedioic acid (123-99-9)

Polyols

1,3-Butanediol (107-88-0)
1,4-Butanediol (110-63-4)
1,4-Cyclohexanedimethanol (105-08-8)
1,2-Ethanediol (107-21-1)
1,6-Hexanediol (629-11-8)
1,3-Pentanediol, 2,2,4-trimethyl- (144-19-4)
1,2-Propanediol, (57-55-6)
1,3-Propanediol, 2,2-bis(hydroxymethyl)- (115-77-5)
1,3-Propanediol, 2,2-dimethyl- (126-30-7)
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)- (77-99-6)
1,3-Propanediol, 2-(hydroxymethyl)-2-methyl- (77-85-0)
1,2,3-Propanetriol (56-81-5)
1,2,3-Propanetriol, homopolymer (25618-55-7)
2-Propen-l-ol, polymer with ethenylbenzene (25119-62-4)

Modifiers

Acetic acid, 2,2′-oxybis- (110-99-6)
1-Butanol (71-36-3)***
Cyclohexanol (108-93-0)
Cyclohexanol, 4,4,-(1-methylethylidene)bis- (80-04-6)
Ethanol, 2-(2-butoxyethoxy)- (112-34-5)
1-Hexanol (111-27-3)
Methanol, hydrolysis products with trichlorohexylsilane and trichlorophenylsilane (72318-84-4*)
1-Phenanthrenemethanol, tetradecahydro-1,4a-dimethyl-7-(1-methylethyl)- (13393-93-6)
Phenol, 4,4′-(1-methylethylidene)bis-, polymer with 2,2′-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bis[oxirane] (25036-25-3)
Siloxanes and Silicones, di-Me, di-Ph, polymers with Ph silsesquioxanes, methoxy-terminated (68440-65-3*)

Siloxanes and Silicones, di-Me, methoxy Ph, polymers with Ph silsesquioxanes, methoxy-terminated (68957-04-0*)

Siloxanes and Silicones, Me Ph, methoxy Ph, polymers with Ph silsesquioxanes, methoxy- and Ph-terminated (68957-06-2*)

Silsesquioxanes, Ph Pr (68037-90-1*)

* The * is used to designate chemical substances of unknown or variable composition, complex reaction products, and biological materials (UVCB). The CAS Registry Numbers for UVCB substances are not used in CHEMICAL ABSTRACTS and its indexes.

** These substances and polyesters made from them may not be manufactured until notices for them are submitted under sections 5(a)(1) or 5(h)(4) of TSCA.

*** These substances may not be used in a substance manufactured from fumaric or maleic acid because of potential risks associated with esters, which may be formed by reaction of these reactants.

(f) *Limited premanufacture notice.* The manufacturer must submit to the Administrator a limited premanufacture notice at least 21 calendar days prior to the date of manufacture.

(1) *Notice form.* The information set forth in paragraph (f)(2) of this section must be submitted on the corresponding sections of Appendix A, 40 CFR part 720 (EPA Form No. 7710-25) as identified below. The manufacturer must indicate clearly on the form that he or she is claiming an exemption from full premanufacture notice requirements under this section.

(2) *Contents of notice.* For substances exempt under paragraph (e) of this section the notice must include to the extent known to or reasonably ascertainable by the manufacturer:

(i) *Manufacturer's name.* This includes the name and address of the manufacturer and the name and telephone number of a technical contact. (part I, section A, appendix A, 40 CFR part 720).

(ii) *Type of exemption.* A designation of whether the manufacturer is claiming an exemption under paragraph (e)(1) or (2) of this section. (Identify on page 1 of the notice.)

(iii) *Site of manufacture.* (Except for chemical substances that are imported.) The name and address of the site or sites of manufacture. (Identify as an attachment to the notice.)

(iv) *Chemical identity.* (A) The identity (by chemical name and CAS Registry Number) and the maximu
cent (by weight) of each react
defined in paragraph (b)(14)
section, used at any weight per
manufacture the polymer. The
facturer must specify any re
used at 2 weight percent or le
should be included as part of th
mer description on the Inv
(part I, section B.2b, appendix
CFR part 720.)

(B) A representative structur
gram of the polymer, if possibl
notice must also indentify syn
and trade names of the new po
(part I, sections B.2c, B.4, B.5,
dix A, 40 CFR part 720.)

(v) *Number-average mo
weight.* The number-average m
lar weight, as defined under par
(b)(9) of this section, of the low
lecular weight composition of th
stance anticipated to be manufa
under the exemption and a desc
of the method used to determi
molecular weight. (part I, s
B.2a, appendix A, 40 CFR part 7

(vi) *Residual monomer and
reactants and low molecular
species content.* (A) The ma
weight percent of each monon
other reactant that will be pres
residual in the polymer as ma
tured for commercial purposes. (
sections B.2b, appendix A, 40
part 720.)

(B) The total maximum weigh
cent of all material below 500 ab
molecular weight and below 1,0
soulute molecular weight in an
position of the polymer that
manufactured. (part I, section
appendix A, 40 CFR part 720.)

(vii) *Impurity information.*
identity, by chemical name and
Registry Number, and estimated
mum weight percent of each im
anticipated to be present in the
mer as manufactured for comm
purposes. If there are unidentifi
purities, the notice must include
timate of their total weight pe
(part I, section B.3, appendix
CFR part 720.)

(viii) *Maximum annual prod
volume.* The maximum prod
volume during the first 12-
period of production and the
mum production volume for an

secutive 12-month period during the first three years of production. (part I, section C.1, appendix A, 40 CFR part 720.)

(ix) *Category of use.* A description of each use for which the polymer would be manufactured, including its function and application (e.g., spray adhesive in the manufacture of laminates). The description of use must also indicate whether the use in industrial, commercial, consumer, and/or site-limited. (part I, section C.2a(1)-(4), appendix A, 40 CFR part 720.)

(x) *Generic chemical identity and use.* If chemical identity or use information provided under this section is claimed as confidential under paragraph (g) of this section, the notice must provide a non-confidential description of this information which is only as generic as necessary to protect the confidentiality of the information. (part I, sections B.6, C.2b, appendix A, 40 CFR part 720.)

(xi) *Test data and other data.* Test data on the polymer in the possession or control of the manufacturer, a description of other data concerning the health and environmental effects of the polymer that are known to or reasonably ascertainable by the manufacturer, and a decription of data on related chemicals, as required in § 720.50 of this chapter. (Identify as an attachment to the notice.)

(xii) *Certification.* A certification that:

(A) The notice includes all test data and other data required.

(B) The person submitting the notice intends to manufacture or import the polymer for a commercial purpose other than for research and development.

(C) All information provided in the notice is complete and truthful as of the date of submission.

(D) The new chemical substance meets the definition of polymer, is not specifically excluded from the exemption, and meets the conditions of the exemption. (Certification, appendix A, 40 CFR part 720, plus statement (xii)(D).)

(xiii) *List of attachments.* The notice must include a list of attachments submitted with the notice. (part III, appendix A, 40 CFR part 720.)

(g) *Notice procedures.* The following sections of part 720 of this chapter apply to the review and handling of notices under this section.

(1) Section 720.25 *Determining whether a chemical substance is on the Inventory.*

(2) Section 720.40 *General.* (Notice Form, Paragraphs (e) through (h)).

(3) Section 720.57 *Imports.*

(4) Section 720.62 *Notice that notification is not required.*

(5) Section 720.70 *Notice in the* FEDERAL REGISTER.

(6) Section 720.80 *General Provisions.*

(7) Section 720.85 *Chemical Identity.*

(8) Section 720.87 *Categories or proposed categories of uses of a new chemical substance.*

(9) Section 720.90 *Data from health and safety studies.*

(10) Section 720.95 *Public file.*

(11) Section 720.102 *Notice of commencement of manufacture or import.*

(h) *Notification of receipt of notice.* EPA will notify the manufacturer by telephone of the date on which the Agency received the notice. This acknowledgement does not constitute a finding by EPA that the notice, as submitted, is in compliance with this section. EPA will consider a person to have submitted the notice on the date the notice is received by the EPA Document Control Officer for the Officer of Toxic Substances.

(i) *Errors in the notice*—(1) Within 10 calendar days or receipt of the notice, EPA may request that the manufacturer remedy errors in the notice.

(2) In the request to correct the notice, EPA will explain the action which the manufacturer must take to correct the notice.

(3) If the manufacturer fails to correct the notice within eight days of receipt of the requests, EPA may determine that the notice is incomplete under paragraph (j) of this section.

(j) *Incomplete submissions*—(1) A submission is not complete, and the notification period does not begin, if:

(i) The wrong person submits the notice form.

(ii) The manufacturer does not sign the notice form.

(iii) Some or all of the information in the notice or the attachments are not in English, except for published scientific literature.

(iv) The manufacturer does not use the notice form.

(v) The manufacturer does not provide information that is required by paragraph (f)(2)(xi) of this section.

(vi) The manufacturer does not provide information required or indicate that is is not known to or reasonably ascertainable by the manufacturer.

(vii) The manufacturer does not submit a second copy of the submission with all confidential information deleted for the public file, as required by § 720.80(b)(2) of this chapter.

(viii) The manufacturer does not include any information required by section 5(b)(1) of the Act and pursuant to a rule promulgated under section 4 of the Act, as required by § 720.40(g) of this chapter.

(ix) The manufacturer does not submit data which the manufacturer believes show that the chemical substance will not present an unreasonable risk of injury to health or the environment, if EPA has listed the chemical substance under section 5(b)(4) of the Act, as required in § 720.40(h) of this chapter.

(2) If EPA determines that a submission is incomplete, the Director, or his or her delegate, will notify the manufacturer within 21 days of receipt that the submission is incomplete and that the notice review period will not begin or continue until EPA receives a complete notice.

(3) The notification that a submission is incomplete under paragraph (j)(2) of this section will include:

(i) A statement of the basis for EPA's determination that the submission is incomplete.

(ii) The requirements for correcting the incomplete submission.

(iii) Information on procedures under § 720.65(c)(4) of this chapter for filing objections to the determination or requesting modification of the requirements for completing the submission.

(4) If EPA determines that a submission is incomplete under this paragraph, it will follow the procedures outlined in § 720.65(c)(4) and (5) of this chapter for filing objections t this determination.

(k) *Review period.* The notice revie period runs for 21 calendar days fro the date the EPA Document Contr Officer for the Office of Toxic Su stances receives a complete limite premanufacture notice submitted a cording to paragraph (f) of this se tion, unless the period is extende under paragraph (l) of this section. I EPA determines that the notice is i complete as specified in paragraph (of this section, the 21-day revie period will not begin until a compe notice is submitted to the Agency Do ument Control Officer.

(l) *Extension of the review* perio (1) At any time during the revie period specified in paragraph (k) o this section, EPA may extend th review period to a total of 90 day from the date of notice submission i the Administrator determines that th polymer should be considered for re ulatory action under sections 5(e) o 5(f) of the Act or that unresolve issues concerning toxicity or exposur require further review.

(i) If the Administrator makes thi determination, the Director or his o her designee will notify the manufa turer by telephone, followed by letter, that the notice review perio has been extended. The letter will e plain the reasons for the extension.

(ii) On receipt of such notificatio the manufacturer must withdraw th limited premanufacture notice or su pend the review period and submit th additional information on the sub stance necessary to constitute a ful notice under part 720 of this chapter If the manufacturer suspends th review period, the manufacturer mus submit the required additional infor mation within 60 days of the date o telephone notification. If EPA receive the information, EPA will review th information following the procedure in part 720 of this chapter, except tha the review period identified i § 720.75(a) of this chapter will b shortened by an amount equal to th days already elapsed in the revie period under paragraph (k) of this sec tion. If the manufacturer withdraw the limited notice or fails to suspend the review period or fails to submi complete additional information within 60 days, manufacture of the polymer may not begin until the manufacturer complies with section 5(a)(1) of the Act and part 720 of this chapter.

(2)(i) At any time during the review period specified in paragraph (l)(1) of this section, EPA may determine that good cause exists to extend the notification period under section 5(c) of the Act. If EPA makes such a determination, the Director will:

(A) Notify the manufacturer by telephone followed by a letter, that EPA is extending the period for a specified length of time. The letter will specify the length of the extension and state the reasons for the extension; and

(B) Publish a notice in the FEDERAL REGISTER, which states that EPA is extending the review period and gives the reasons for the extension.

(ii) The extension under paragraph (l)(2)(i) of this section may be for a period of up to 90 days. If the extension is for less than 90 days, EPA may make additional extensions. However, the total period of extensions under paragraph (l)(2) of this section may not exceed 90 days for any notice.

(m) *Withdrawal of a notice by the manufacturer.* (1) A manufacturer may withdraw a notice during the notice review period specified in paragraph (k) or (l) of this section. A statement of withdrawal must be made in writing to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The withdrawal is effective upon receipt of the statement by the Document Control Officer.

(2) If a manufacturer or importer who withdraws a notice later resubmits a notice for the same chemical sustance, a new notice review period begins.

(n) *Expiration of review period.* If the review period identified in paragraph (k) of this section expires without notification of extension by EPA, manufacture or import may begin under the terms of the exemption. The fact that EPA does not initiate regulatory action during the review period does not constitute EPA approval or certification of the substance, and does not mean that EPA may not take regulatory action on the substance in the future.

(o) *Inventory.* For any polymer for which the review period has expired under paragraph (k) of this section, and for which a notice of commencement of manufacture has been submitted under § 720.102 of this chapter, EPA will add the substance to the Inventory. The substance will be identified on the Inventory by:

(1) The name of each reactant used at greater than 2 percent by weight in the manufacture of the polymer and by those reactants used at 2 weight percent or less as identified under paragraph (f)(2)(iv) of this section.

(2) The criteria identified in paragraphs (d) (1) through (7) of this section.

(3) The information provided in paragraph (f)(2)(vi) of this section.

(4) For substances exempt under paragraph (e)(1) of this section, the minimum permissible number-average molecular weight of 1,000.

(p) *Actions under sections 5(e) and 5(f) of the Act.* EPA will act under section 5(e) or 5(f) of the Act on a substance submitted under paragraph (e) of this section if the Agency determines that the statutory criteria for such action are met.

(q) *Notification of Ineligibility*—(1) *During the period from notice submission until commencement of manufacture.* If at any time between submission of a notice under paragraph (f) of this section and commencement of manufacture of the new chemical substance described in the notice, the Director determines that the new chemical substance does not meet the terms of this section, the Director or his or her designee will immediately notify the manufacturer by telephone, and subsequently by certified letter, that the substance does not meet the terms of this section and will explain the reasons for the determination. After receiving notice of such a determination, the manufacturer may not begin to manufacture the new chemical substance without complying with section 5(a)(1) of the Act and Part 720 of this chapter.

(2) *After commencement of manufacture.* (i)(A) If at any time after commencement of manufacture of a chemical substance which was the subject of a notice under paragraph (f) of this section, the Director determines that the chemical substance being manufactured does not comply with the identification entered on the Inventory under paragraph (o) of this section and that the substance is not otherwise on the Inventory, the Director or his or her designee will notify the manufacturer by telephone, and subsequently by certified letter, that EPA believes that the new chemical substance is being manufactured in violation of this section.

(B) The manufacturer may continue to manufacture, process, distribute in commerce, or use the chemical substance after receiving notification under paragraph (q)(2)(i)(A) of this section if the manufacturer was manufacturing, processing, distributing in commerce, or using the substance at the time of telephone notification and if the manufacturer submits objections or an explanation under paragraph (q)(2)(ii) of this section. Manufacturers not manufacturing, processing, distributing in commerce, or using the chemical substance at the time of telephone notification may not begin such activity until EPA makes its final determination under paragraph (q)(2)(iii) of this section.

(C) If EPA brings an enforcement action under this section, the manufacturer will not be subject to penalty under section 15 of the Act for continuing commercial activity from the date of telephone notification under paragraph (q)(2)(i)(A) of this section through the date of notification under paragraph (q)(2)(iii) of this section.

(ii) A manufacturer which has received notice under paragraph (q)(2)(i) of this section may submit detailed objections to the determination or an explanation of its diligence and good faith efforts in attempting to comply with the terms of this section and with the identification of the substance on the Inventory, or both, within 15 days of receipt of the written notification.

(iii) The Director will consider any objections or explanation submitted under paragraph (q)(2)(ii) of this section, will make a final determination and will notify the manufacturer of the final determination by telephone within 15 days of receipt of the objections or explanation, and subsequently by certified letter.

(iv) EPA may begin an enforcement action against the manufacturer if:

(A) The Director does not receive objections or an explanation within the 15 days specified in paragraph (q)(2)(ii) of this section.

(B) The Director determines, after considering the objections or explanation, that the chemical substance does not comply with the identification on the Inventory and is not otherwise on the Inventory and that the manufacturer did not act with due diligence and in good faith to comply with all of the terms of this section and with the identification of the substance on the Inventory.

(C) The Director makes the determination specified in paragraph (q)(2)(i of this section, but the manufacturer continues manufacture of the new chemical substance without submitting a full notice under Part 720 of this Chapter as specified in paragraph (q)(2)(v) of this section.

(v) The Director may determine after considering the explanation and objections, if any, that, while the chemical substance does not comply with the identification on the Inventory and is not otherwise on the Inventory, the manufacturer acted with due diligence and in good faith to comply with the terms of this section and the identification of the substance on the Inventory. If the Director makes such a determination, the manufacturer may continue manufacturing, processing, distributing in commerce, and using the new chemical substance if:

(A) It was actually manufacturing, processing, distributing in commerce or using the chemical substance at the time it received the telephone notification specified in paragraph (q)(2)(i) of this section.

(B) It submits a full notice on the new chemical substance under section 5(a)(1) of the Act and Part 720 of this chapter within 15 days of receipt of the telephone notification under paragraph (q)(2)(iii) of this section. Such manufacture, processing, distribution in commerce, and use may continue unless EPA takes action under sections 5(e) or 5(f) of the Act.

(3) Action under this paragraph does not preclude action under sections 7, 15, 16, and 17 of the Act.

(r) *Recordkeeping.* (1) A manufacturer of a new polymer under paragraph (e) (1) or (2) of this section, must keep the records described in this paragraph for 5 years from the date of commencement of manufacture.

(2) The records must include the following to demonstrate compliance with the terms of this section:

(i) Records of production volume for the first 3 years of manufacture, the date of commencement of manufacture, and documentation of this information.

(ii) Documentation of any other information provided in the limited premanufacture notice, including:

(A) Information to demonstrate that the new polymer is not specifically excluded from the exemption.

(B) Information to demonstrate that the polymer meets the exemption criteria in paragraph (e)(1) or (2) of this section.

(3) The manufacturer must submit the records listed in paragraph (r)(2) of this section to EPA upon written request by the Director of the Office of Toxic Substances. The manufacturer must provide these records within 15 working days of receipt of this request. In addition, any person who manufactures a new chemical substance under the terms of this section, upon request of any officer or employee of EPA designated by the Administrator, must permit such person at all reasonable times to have access to and to copy these records.

(s) *Submission of information.* Information submitted to EPA under this section must be sent in writing to: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(t) *Compliance.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) A person who manufactures or imports a new chemical substance before a notice is submitted and the notice review period expires is in violation of section 15 of the Act.

(3) Using for commercial purposes a chemical substance or mixture which a person knew or had reason to know was manufactured, processed, or distributed in commerce in violation of section 5 or this rule is a violation of section 15 of the Act (15 U.S.C. 2614).

(4) Failure or refusal to establish and maintain records or to permit access to or copying of records, as required by this section and section 11 of the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

(5) Failure or refusal to permit entry or inspection as required by section 11 of the Act is a violation of section 15 of the Act (15 U.S.C. 2614).

(6) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation. Persons who submit materially misleading or false information in connection with the requirements of any provision of this section may be subject to penalties calculated as if they never filed their notices.

(7) EPA may seek to enjoin the manufacture or processing of a chemical substance in violation of this section or act to seize any chemical substance manufactured or processed in violation of this section or take other actions under the authority of section 7 of this Act (15 U.S.C. 2606) or section 17 of this Act (15 U.S.C. 2616).

(u) *Inspections.* EPA will conduct inspections under section 11 of the Act to assure compliance with section 5 and this section, to verify that information submitted to EPA under this section is true and correct, and to audit data submitted to EPA under this section.

(The information collection requirements contained in paragraph (m)(1) were approved by the Office of Management and Budget under control number 2070-0012)

[49 FR 46086, Nov. 21, 1984, as amended at 53 FR 12523, Apr. 15, 1988]

PART 747—METALWORKING FLUIDS

Subpart A—[Reserved]

Subpart B—Specific Use Requirements for Certain Chemical Substances

747.115 Mixed mono and diamides of an organic acid.
747.195 Triethanolamine salt of a substituted organic acid.
747.200 Triethanolamine salt of tricarboxylic acid.

AUTHORITY: 15 U.S.C. 2604 and 2605.

Subpart A—[Reserved]

Subpart B—Specific Use Requirements for Certain Chemical Substances

§ 747.115 Mixed mono and diamides of an organic acid.

This section identifies activities with respect to a chemical substance which are prohibited and requires that warnings and instructions accompany the substance when distributed in commerce.

(a) *Chemical substance subject to this section.* The following chemical substance, referred to by its premanufacture notice number and generic chemical name, is subject to this section: P-84-529, mixed mono and diamides of an organic acid.

(b) *Definitions.* Definitions in section 3 of the Act, 15 U.S.C. 2602, apply to this section unless otherwise specified in this paragraph. In addition, the following definitions apply:

(1) The terms "Act," "article," "chemical substance," "commerce," "importer," "impurity," "Inventory," "manufacturer," "person," "process," "processor," and "small quantities solely for research and development" have the same meaning as in § 720.3 of this chapter.

(2) "Metalworking fluid" means a liquid of any viscosity or color containing intentionally added water used in metal machining operations for the purpose of cooling, lubricating, or rust inhibition.

(3) "Nitrosating agent" means any substance that has the potential to transfer a nitrosyl group (-NO) to a primary, secondary, or tertiary amine to form the corresponding nitrosamine.

(4) "Process or distribute in commerce solely for export" means to process or distribute in commerce solely for export from the United States under the following restrictions on domestic activity:

(i) Processing must be performed at sites under the control of the processor.

(ii) Distribution in commerce is limited to purposes of export.

(iii) The processor or distributor may not use the substance except in small quantities solely for research and development.

(c) *Use limitations.* (1) Any person producing a metalworking fluid, or a product which could be used in or as a metalworking fluid, which includes as one of its components P-84-529, is prohibited from adding any nitrosating agent to the metalworking fluid or product.

(2) Any person using as a metalworking fluid a product containing P-84-529 is prohibited from adding any nitrosating agent to the product.

(d) *Warnings and instructions.* (1) Any person who distributes in commerce P-84-529 in a metalworking fluid, or in any form in which it could be used as a component of a metalworking fluid, must send to each recipient of P-84-529 and confirm receipt in writing prior to the first shipment to that person:

(i) A letter that includes the following statements:

> A substance, identified generically as mixed mono and diamides of an organic acid, contained in the product (*insert distributor's other identifier for product containing P-84-529*) has been regulated by the Environmental Protection Agency, at 40 CFR 747.115, as published in the FEDERAL REGISTER of September 20, 1984. A copy of the regulation is enclosed. The regulation prohibits the addition of any nitrosating agent, including nitrites, to the mixed mono and diamides of an organic acid, when the substance is or could be used in metalworking fluids. The addition of nitrites or other nitrosating agents to this substance leads to formation of a substance known to cause cancer in laboratory animals. The mixed mono and diamides of an organic acid has been specifically designed to be used with-

out nitrites. Consult the enclosed regulation for further information.

(ii) A copy of this § 747.115.

(2)(i) Any person who distributes in commerce a metalworking fluid containing P-84-529 must affix a label to each container containing the fluid.

(ii) The label shall contain a warning statement which shall consist only of the following language:

> WARNING! Do Not Add Nitrites to This Metalworking Fluid under Penalty of Federal Law. Addition of nitrites leads to formation of a substance known to cause cancer. This product is designed to be used without nitrites.

(iii) The first work of the warning statement shall be capitalized, and the type size for the first word shall be no smaller than six point type for a label five square inches or less in area, ten point type for a label above five but below ten square inches in area, twelve point type for a label above ten but below fifteen square inches in area, fourteen point type for a label above fifteen but below thirty square inches in area, or eighteen point type for a label over thirty square inches in area. The type size of the remainder of the warning statement shall be no smaller than six point type. All required label text shall be of sufficient prominence, and shall be placed with such conspicuousness relative to other label text and graphic material, to insure that the warning statement is read and understood by the ordinary individual under customary conditions of purchase and use.

(e) *Liability and determining whether a chemical substance is subject to this section.* (1) If a manufacturer or importer of a chemical substance which is described by the generic chemical name in paragraph (a) of this section makes an inquiry under § 710.7(g) of this chapter or § 720.25(b) of this chapter as to whether the specific substance is on the Inventory and EPA informs the manufacturer or importer that the substance is on the Inventory, EPA will also inform the manufacturer or importer whether the substance is subject to this section.

(2) Except for manufacturers and importers of P-84-529, no processor, distributor, or user of P-84-529 will be in violation of this section unless that person has received a letter specified in paragraph (d)(1) of this section or a container with the label specified in paragraph (d)(2) of this section.

(f) *Exemptions.* A person identified in paragraphs (c) and (d) of this section is not subject to the requirements of those paragraphs if:

(1) The person manufactures, imports, processes, distributes in commerce, or uses the substance only in small quantities solely for research and development and in accordance with section 5(h)(3) of the Act.

(2) The person manufactures, imports, processes, distributes in commerce, or uses the substance only as an impurity.

(3) The person imports, processes, distributes in commerce, or uses the substance only as part of an article.

(4) The person processes or distributes the substance in commerce solely for export and, when distributing in commerce, lables the substance in accordance with section 12(a)(1)(B) of the Act.

(g) *Enforcement.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act [15 U.S.C. 2614].

(2) Failure or refusal to permit access to or copying of records, as required under section 11 of the Act, is a violation of section 15 of the Act [15 U.S.C. 2614].

(3) Failure or refusal to permit entry or inspection, as required under section 11 of the Act, is a violation of section 15 of the Act [15 U.S.C. 2614].

(4) Violators may be subject to the civil and criminal penalties in section 16 of the Act [15 U.S.C. 2615] for each violation.

(5) EPA may seek to enjoin the processing, distribution in commerce, or use of a chemical substance in violation of this section; act to seize any chemical substance processed, distributed in commerce, or used in violation of this section; or take other actions under the authority of sections 7 and 17 of the Act [15 U.S.C. 2605 and 2616].

[49 FR 36855, Sept. 20, 1984]

§ 747.195 Triethanolamine salt of a substituted organic acid.

This section identifies activities with respect to a chemical substance which are prohibited and requires that warnings and instructions accompany the substance when distributed in commerce.

(a) *Chemical substance subject to this section.* The following chemical substance, referred to by its premanufacture notice number and generic chemical name, is subject to this section: P-84-310, triethanolamine salt of a substituted organic acid.

(b) *Definitions.* Definitions in section 3 of the Act, 15 U.S.C. 2602, apply to this section unless otherwise specified in this paragraph. In addition, the following definitions apply:

(1) The terms "Act," "article," "chemical substance," "commerce," "importer," "impurity," "Inventory," "manufacturer," "person," "process," "processor," and "small quantities solely for research and development," have the same meaning as in § 720.3 of this chapter.

(2) "Metalworking fluid" means a liquid of any viscosity or color containing intentionally added water used in metal machining operations for the purpose of cooling, lubricating, or rust inhibition.

(3) "Nitrosating agent" means any substance that has the potential to transfer a nitrosyl group (—NO) to a primary, secondary, or tertiary amine to form the corresponding nitrosamine.

(4) "Process or distribute in commerce solely for export" means to process or distribute in commerce solely for export from the United States under the following restrictions on domestic activity:

(i) Processing must be performed at sites under the control of the processor.

(ii) Distribution in commerce is limited to purposes of export.

(iii) The processor or distributor may not use the substance except in small quantities solely for research and development.

(c) *Use limitations.* (1) Any person producing a metalworking fluid, or a product which could be used in or as a metalworking fluid, which includes as one of its components P-84-310, is prohibited from adding any nitrosatin agent to the metalworking fluid o product.

(2) A person using as a metalworkin fluid a product containing P-84-310 i prohibited from adding any nitrosating agent to the product.

(d) *Warnings and instructions.* (Any person who distributes in commerce P-84-310 in a metalworkin fluid, or in any form in which it coul be used as a component of a meta working fluid, must send to each recipient of P-84-310 and confirm receipt i writing prior to the first shipment t that person:

(i) A letter that includes the following statements: A substance, identifie generically as a triethanolamine sal of a substituted organic acid, contained in the product (*insert distributor's trade name or other identifier fo product containing P-84-310*) ha been regulated by the Environmenta Protection Agency, at 40 CFR 747.19 as published in the FEDERAL REGISTE of June 14, 1984. A copy of the regulation is enclosed. The regulation prohibits the addition of any nitrosatin agent, including nitrites, to the triethanolamine salt of a substituted organi acid, when the substance is or could b used in metalworking fluids. The addition of nitrites or other nitrosatin agents to this substance leads to formation of a substance known to caus cancer in laboratory animals. The triethanolamine salt of a substituted organic acid has been specifically designed to be used without nitrite Consult the enclosed regulation fo further information.

(ii) A copy of this § 747.195.

(2)(i) Any person who distributes i commerce a metalworking fluid containing P-84-310 must affix a label t each container containing the fluid.

(ii) The label shall contain a warnin statement which shall consist only o the following language:

> **WARNING! Do Not Add Nitrites to Thi Metalworking Fluid under Penalty of Federal Law. Addition of nitrites leads to formation of a substance known to cause cance This product is designed to be used withou nitrites.**

(iii) The first word of the warning statement shall be capitalized, and the type size for the first word shall be no smaller than six point type for a label five square inches or less in area, ten point type for a label above five but below ten square inches in area, twelve point type for a label above ten but below fifteen square inches in area, fourteen point type for a label above fifteen but below thirty square inches in area, or eighteen point type for a label over thirty square inches in area. The type size of the remainder of the warning statement shall be no smaller than six point type. All required label text shall be of sufficient prominence, and shall be placed with such conspicuousness relative to other label text and graphic material, to insure that the warning statement is read and understood by the ordinary individual under customary conditions of purchase and use.

(e) *Liability and determining whether a chemical substance is subject to this section.* (1) If a manufacturer or importer of a chemical substance which is described by the generic chemical name in paragraph (a) of this section makes an inquiry under § 710.7(g) of this chapter or § 720.25(b) of this chapter as to whether the specific substance is on the Inventory and EPA informs the manufacturer or importer that the substance is on the Inventory, EPA will also inform the manufacturer or importer whether the substance is subject to this section.

(2) Except for manufacturers and importers of P-84-310, no processor, distributor, or user of P-84-310 will be in violation of this section unless that person has received a letter specified in paragraph (d)(1) of this section or a container with the label specified in paragraph (d)(2) of this section.

(f) *Exemptions.* A person identified in paragraphs (c) and (d) of this section is not subject to the requirements of those paragraphs if:

(1) The person manufactures, imports, processes, distributes in commerce, or uses the substance only in small quantities solely for research and development and in accordance with section 5(h)(3) of the Act.

(2) The person manufactures, imports, processes, distributes in commerce, or uses the substance only as an impurity.

(3) The person imports, processes, distributes in commerce, or uses the substance only as part of an article.

(4) The person processes or distributes the substance in commerce solely for export, and when distributing in commerce, labels the substance in accordance with section 12(a)(1)(B) of the Act.

(g) *Enforcement.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) Failure or refusal to permit access to or copying of records, as required under section 11 of the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

(3) Failure or refusal to permit entry or inspection, as required under section 11 of the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

[49 FR 24668, June 14, 1984]

§ 747.200 Triethanolamine salt of tricarboxylic acid.

This section identifies activities with respect to two chemical substances which are prohibited and requires that warnings and instructions accompany the substances when distributed in commerce.

(a) *Chemical substances subject to this section.* The following chemical substances, referred to by their premanufacture notice numbers and generic chemical names, are subject to this section:

P-83-1005, triethanolamine salt of tricarboxylic acid; and

P-83-1062, tricarboxylic acid.

(b) *Definitions.* Definitions in section 3 of the Act, 15 U.S.C. 2602, apply to this section unless otherwise specified in this paragraph. In addition, the following definitions apply:

(1) The terms "Act," "article," "byproducts," "chemical substance," "commerce," "imported," "impurity," "Inventory," "manufacture or import for commercial purposes," "manufacture solely for export," "manufacturer," "new chemical substance," "person," "process," "processor," and "small quantities solely for research

and development" have the same meaning as in § 720.3 of this chapter.

(2) "Metalworking fluid" means a liquid of any viscosity or color containing intentionally added water used in metal machining operations for the purpose of cooling or lubricating.

(3) "Nitrosating agent" means any substance that has the potential to transfer a nitrosyl group (—NO) to a secondary or tertiary amine to form the corresponding nitrosamine.

(c) *Use limitations.* (1) Any person producing a metalworking fluid, or a product which could be used in or as a metalworking fluid, which includes as one of its components P-83-1005 is prohibited from adding any nitrosating agent to the metalworking fluid or product.

(2) Any person using as metalworking fluid a product containing P-83-1005 is prohibited from adding any nitrosating agent to the product.

(d) *Warnings and instructions.* (1) Any person who distributes in commerce P-83-1005 in a metalworking fluid, or in any form in which it could be used as a component of a metalworking fluid, must sent to each recipient of P-83-1005 and confirm receipt prior to the first shipment to that person:

(i) A letter that includes the following statements:

> A substance, identified generically as triethanolamine salt, of tricarboxylic acid, contained in the product (*insert distributor's trade name or other identifier for product containing P-83-1005*) has been regulated by the Environmental Protection Agency, at 40 CFR 747.200, as published in the Federal Register of January 23, 1984. A copy of the regulation is enclosed. The regulation prohibits the addition of any nitrosating agent, including nitrites, to the triethanolamine salt of tricarboxylic acid, when the substance is or could be used in metalworking fluids. The addition of nitrites or other nitrosating agents to this substance leads to formation of a substance known to cause cancer in laboratory animals. The triethanolamine salt of the tricarboxylic acid, has been specifically designed to be used without nitrites. Consult the enclosed regulation for further information.

(ii) A copy of this rule.

(2) Any person who distributes in commerce a metalworking fluid containing P-83-1005 must affix to each container containing the fluid a label
that includes, in letters no sma
than ten point type, the follo
statement:

> WARNING! Do Not Add Nitrites to
> Metalworking Fluid under Penalty of F
> al Law. Addition of nitrite leads to fo
> tion of a substance known to cause ca
> This product is designed to be used wit
> nitrites.

(3) Any person who distribute
commerce P-83-1062 in any form
which it could be combined with w
and triethanolamine to produce P
1005 must send to each recipient o
83-1062, and confirm receipt prior
the first shipment to that person:

(i) A letter that includes the fol
ing statements:

> A substance, identified generically as
> carboxylic acid, contained in the pro
> (*insert distributor's trade name* or
> *identifier for product containing P-83-*
> has been regulated by the Environme
> Protection Agency (40 CFR 747.200
> lished in the Federal Register of Jan
> 23, 1984. A copy of the regulation is
> closed. Combining tricarboxylic acid
> water and the triethanolamine produc
> substance, identified generically as the
> ethanolamine salt of the tricarboxylic
> The regulation prohibits the addition o
> trosating agents, including nitrites, to
> triethanolamine salt of tricarboxylic
> when that substance is or could be use
> metalworking fluids. The addition of
> trites or other nitrosating agents to
> substance leads to formation of a subst
> known to cause cancer in laboratory
> mals. Consult the enclosed regulation
> further information.

(ii) A copy of this rule.

(e) *Liability and determining wh*
er a chemical substance is subjec
this section. (1) If a manufacturer
importer of a chemical substa
which is described by one of the ge
ic names in paragraph (a) of this
tion makes an inquiry under § 710.
of this chapter or § 720.25(b) of
chapter as to whether the specific
stance is on the Inventory and EPA
forms the manufacturer or impo
that the substance is on the Inve
ry, EPA will also inform the manu
turer or importer whether the
stance is subject to this section.

(2) Except for manufacturers
importers of P-83-1005 and P-83-1
no processor, distributor, or user of
83-1005 or P-83-1062 will be in vi

tion of this section unless that person has received a letter specified in paragraph (d)(1) or (3) of this section or a container with the label specified in paragraph (d)(2) of this section.

(f) *Exemptions and exclusions.* The chemical substances identified in paragraph (a) of this section are not subject to the requirements of paragraphs (c) and (d) of this section, if:

(1) The substance is manufactured, imported, processed, distributed in commerce, and used only in small quantities solely for research and development, and if the substance is manufactured, imported, processed, distributed in commerce, and used in accordance with section 5(h)(3) of the Act.

(2) The substance is manufactured, imported, processed, distributed in commerce, or used only as an impurity.

(3) The substance is imported, processed, distributed in commerce, or used only as part of an article.

(4) The substance is manufactured solely for export.

(g) *Enforcement.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) Failure or refusal to permit access to or copying of records, as required under section 11 of the Act, is a violation of a section 15 of the Act (15 U.S.C. 2614).

(3) Failure or refusal to permit entry or inspection, as required under section 11 of the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

(4) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C 2615) for each violation.

(5) EPA may seek to enjoin the processing, distribution in commerce, or use of a chemical substance in violation of this section, act to seize any chemical substance, processed, distributed in commerce, or used in violation of this section or take other actions under the authority of section 7 or 17 of the Act (15 U.S.C. 2605 or 2616).

[49 FR 2772, Jan. 23, 1984]

PART 749—WATER TREATMENT CHEMICALS

Subparts A-C—[Reserved]

Subpart D—Air Conditioning and Cooling Systems

Sec.
749.68 Hexavalent chromium chemicals in comfort cooling towers.

AUTHORITY: 15 U.S.C. 2605 and 2607.

Subpart A-C—[Reserved]

Subpart D—Air Conditioning and Cooling Systems

§ 749.68 Hexavalent chromium chemicals in comfort cooling towers.

(a) *Chemical substance subject to this section.* Hexavalent chromium, usually in the form of sodium dichromate (CAS No. 10588-01-9), is subject to this section.

(b) *Purpose.* The purpose of this section is to impose certain requirements on activities involving hexavalent chromium to prevent unreasonable risks associated with human exposure to air emissions of hexavalent chromium from comfort cooling towers.

(c) *Applicability.* This section is applicable to hexavalent chromium use in comfort cooling towers and to distribution in commerce of hexavalent chromium-based water treatment chemicals for use in cooling systems.

(d) *Definitions.* Definitions in section 3 of the Toxic Substances Control Act, 15 U.S.C. 2602, apply to this section unless otherwise specified in this paragraph. In addition, the following definitions apply:

(1) *Act* means the Toxic Substances Control Act, 15 U.S.C. 2601 *et seq.*

(2) *Chilled water loop* means any closed cooling water system that transfers heat from air handling units or refrigeration equipment to a refrigeration machine, or chiller.

(3) *Closed cooling water system* means any configuration of equipment in which heat is transferred by circulating water that is contained within the equipment and not discharged to

the air; chilled water loops are included.

(4) *Comfort cooling towers* means cooling towers that are dedicated exlusively to and are an integral part of heating, ventilation, and air conditioning or refrigeration systems.

(5) *Container* means any bag, barrel, bottle, box, can, cylinder, drum, or the like that holds hexavalent chromium-based water treatment chemicals for use in cooling systems.

(6) *Cooling tower* means an open water recirculating device that uses fans or natural draft to draw or force ambient air through the device to cool warm water by direct contact.

(7) *Cooling system* means any cooling tower or closed cooling water system.

(8) *Distributor* means any person who distributes in commerce water treatment chemicals for use in cooling systems.

(9) *EPA* means the Environmental Protection Agency.

(10) *Hexavalent chromium chemicals* means any combination of chemical substances containing hexavalent chromium and includes hexavalent chromium-based water treatment chemicals.

(11) *Hexavalent chromium-based water treatment chemicals* means any hexavalent chromium, alone or in combination with other water treatment chemicals, used to treat water.

(12) *Industrial cooling tower* means any cooling tower used to remove heat from industrial processes, chemical reactions, or plants producing electrical power.

(13) *Label* means any written, printed, or graphic material displayed on or affixed to containers of hexavalent chromium-based water treatment chemicals that are to be used in cooling systems.

(14) *Person* means any natural person, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity; any State or political subdivision thereof; any municipality; any interstate body; and any department, agency, or instrumentality of the Federal Government.

(15) *Shipment* means the act or p ess of shipping goods by any form conveyance.

(16) *Water treatment* chemi means any combination of chem substances used to treat water in c ing systems and can include corro inhibitors, antiscalants, dispers and any other chemical substa except biocides.

(e) *Prohibition of distribution commerce and commercial use.* (1) persons are prohibited from distri ing in commerce hexavalent chro um-based water treatment chemic for use in comfort cooling towers.

(2) All persons are prohibited fr commercial use of hexavalent chro um-based water treatment chemic in comfort cooling towers.

(3) Distribution in commerce of he avalent chromium-based water tre ment chemicals for use in, and co mercial use of hexavalent chromiu based water treatment chemicals industrial cooling towers and clo cooling water systems are not prohi ited.

(f) *Effective dates.* (1) The prohi tion described in paragraph (e)(1) this section against distributing commerce hexavalent chromium-ba water treatment chemicals for use comfort cooling towers is effect February 20, 1990.

(2) The prohibition described paragraph (e)(2) of this secti against using hexavalent chromiu based water treatment chemicals comfort cooling towers is effect May 18, 1990.

(g) *Labeling.* (1) Each person w distributes in commerce hexavale chromium-based water treatme chemicals after February 20, 19 shall affix a label, or keep affixed existing label in accordance with t paragraph, to each container of t chemicals. The label shall consist the following language:

WARNING: This product contains he valent chromium. Inhalation of hexaval chromium air emissions increases the risk lung cancer. Federal law prohibits use this substance in comfort cooling towe which are towers that are open water re culation devices and that are dedicated clusively to, and are an integral part heating, ventilation, and air conditioning or refrigeration systems.

(2) The first word of the warning statement shall be capitalized, and the type size for the first word shall be no smaller than 10-point type for a label less than or equal to 10 square inches in area, 12-point type for a label above 10 but less than or equal to 15 square inches in area, 14-point type for a label above 15 but less than or equal to 30 square inches in area, or 18-point type for a label above 30 square inches in area. The type size of the remainder of the warning statement shall be no smaller than 6-point type. All required label text shall be in English and of sufficient prominence and shall be placed with such conspicuousness, relative to other label text and graphic material, to ensure that the warning statement is read and understood by the ordinary individual under customary conditions of purchase and use.

(h) *Recordkeeping.* (1) Each person who distributes in commerce any hexavalent chromium-based water treatment chemicals for use in cooling systems after February 20, 1990, shall retain in one location at the headquarters of the distributor documentation showing:

(i) The name, address, contact, and telephone number of the cooling system owners/operators to whom the chemicals were shipped.

(ii) The chemicals included in the shipment, the amount of each chemical shipped, and the location(s) at which the chemicals will be used.

(2) The information described in paragraph (h)(1) of this section shall be retained for 2 years from the date of shipment.

(i) *Reporting.* (1) Each person who distributes in commerce any hexavalent chromium-based water treatment chemicals for use in cooling systems shall report to the Regional Administrator of the EPA Region in which the distibutor headquarters is located. The report shall be postmarked not later than February 20, 1990, or 30 days after the person first begins the distribution in commerce of hexavalent chromium-based water treatment chemicals, whichever is later, and shall include:

(i) For the headquarters, the distributor name, address, telephone number, and the name of a contact.

(ii) For the shipment offices through which hexavalent chromium-based water treatment chemicals are sold for use in cooling systems, the distributor name, address, telephone number, and the name of a contact.

(2) The report identified in paragraph (i)(1) of this section shall be updated as changes occur in the distributor headquarters or shipment office information. The updated report shall be submitted to the Regional Administrator and postmarked no later than 10 calendar days after the change occurs.

(3) A person may assert a claim of confidentiality for any information submitted to EPA in connection with this rule. Any claim of confidentiality must accompany the information when submitted to EPA. Persons claiming information as confidential should do so by circling, bracketing, or underlining it and marking it with "CONFIDENTIAL." EPA will disclose information subject to a claim of confidentiality only to the extent permitted by section 14 of TSCA and 40 CFR part 2, subpart B. If a person does not assert a claim of confidentiality for information at the time it is submitted to EPA, EPA may make the information public without further notice to that person.

(j) *Enforcement.* (1) Failure to comply with any provision of this section is a violation of section 15 of the Act (15 U.S.C. 2614).

(2) Failure or refusal to establish and maintain records or to permit access to or copying of records, as required by the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

(3) Failure or refusal to permit entry or inspection as required by section 11 of the Act (15 U.S.C. 2610) is a violation of section 15 of the Act (15 U.S.C. 2614).

(4) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation.

(k) *Inspections.* EPA will conduct inspections under section 11 of the Act (15 U.S.C. 2610) to ensure compliance with this section.

[55 FR 240, Jan. 3, 1990]

PART 750—PROCEDURES FOR RULEMAKING UNDER SECTION 6 OF THE TOXIC SUBSTANCES CONTROL ACT

Subpart A—Procedures for Rulemaking Under Section 6 of the Toxic Substances Control Act

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AUTHORITY: 15 U.S.C. 2605.

Subpart A—Procedures for Rulemaking Under Section 6 of the Toxic Substances Control Act

SOURCE: 42 FR 61259, Dec. 2, 1977, unless otherwise noted.

§ 750.1 Applicability.

This part applies to all rulemak
under authority of section 6 of
Toxic Substances Control Act (TS
15 U.S.C. 2605.

§ 750.2 Notice of proposed rulemaking

(a) Each rulemaking becomes
ject to this part with the publica
of a Notice of Proposed Rulemakin
the FEDERAL REGISTER. A procee
under section 6 of the Toxic
stances Control Act may begin, as
propriate, with the publication in
FEDERAL REGISTER of a Notice of
posed Rulemaking, an Advance No
of Proposed Rulemaking, or notic
other action, such as a formal reg
tory investigation designed to lea
issuance of rules within a reason
time.

(b) Each such notice shall contain

(1) A draft finding that there
reasonable basis to conclude that
manufacture, processing, distribut
in commerce, use or disposal of
chemical substance(s) or mixture(s
issue, or any combination of such
tivities, presents or will present an
reasonable risk of injury to health
the environment.

(2) A Notice of Proposed Rulem
ing stating with particularity the
sons for the proposed rule toget
with a statement why the propo
rule protects adequately against
risk(s) involved using the least burd
some requirements authorized
TSCA.

(3) Either the draft text of the
posed rule (which may include alter
tive approaches among which a fi
choice has not yet been made) or a
scription of the approaches and pr
sions being considered for inclusion
the rule, or some combination of
above.

(4) Except for rules published un
authority of section 6(e), a draft sta
ment with respect to:

(i) The effects of the substance(s)
mixture(s) at issue on health and
magnitude of the exposure of hum
beings to such substance(s)
mixture(s);

(ii) The effects of the substace(s)
mixture(s) at issue on the envir
ment and the magnitude of the ex

sure of the environment to such substance(s) or mixture(s).

(iii) The benefits of the substance(s) or mixture(s) at issue for various uses and the availability of substitutes for such uses; and

(iv) The reasonably ascertainable economic consequences of the rule, after consideration of the effect on the national economy, small business, technological innovation, the environment, and public health.

(v) Major impacts of alternatives to the proposed rule shall also be analyzed.

(5) In cases where the administrator, in his or her discretion, determines that a risk of injury to health or the environment could be eliminated or reduced to a sufficient extent by actions taken under a Federal law (or laws) other than TSCA administered in whole or in part by the Administrator, a finding that it is in the public interest to proceed against such risk under TSCA. Any such finding shall be accompanied by a brief statement discussing:

(i) All relevant aspects of the risk;

(ii) A comparison of the estimated costs of complying with actions taken under TSCA and under such other law (or laws); and

(iii) The relative efficiency of actions under TSCA and under such other law (or laws) to protect against risk of injury.

Two or more or all of the statements required above may be combined in the same narrative for efficiency of exposition as long as each of the required points is discussed. Any statement required by this paragraph may reference other documents which are not published in the FEDERAL REGISTER. All such referenced documents shall be included in the rulemaking record. Either the statements required by this paragraph or the documents they reference shall contain a discussion of the factual, analytical, policy and legal considerations behind the agency decision to issue the proposed rule in the form chosen. A brief summary of these considerations shall be included in the preamble in any case. All factual materials and each analytical methodology seriously considered shall be fully disclosed. Significant areas of uncertainty known to the Agency under each heading shall be identified, and the manner in which the Agency intends to deal with them shall be specified.

(c) In addition to the material required under paragraph (b) of this section, each notice of proposed rulemaking shall contain:

(1) A statement of the time and place at which the informal hearing required by section 6(c)(2)(C) of TSCA shall begin, or, to the extent these are not specified, a statement that they will be specified later in a separate FEDERAL REGISTER notice *Provided*, That FEDERAL REGISTER notice of the date and city at which any informal hearing shall begin shall be given at least 30 days in advance;

(2) A statement identifying the place at which the official record of the rulemaking is located, the hours during which it will be open for public inspection, the documents contained in it as of the date the notice of proposed rulemaking was issued, and a statement of the approximate times at which additional materials such as public comments, hearing transcripts, and agency studies in progress will be added to the record. If any material other than public comments or material generated by a hearing is added to the record after publication of the notice required by this section, and notice of its future addition was not given at the time of that initial publication, a separate FEDERAL REGISTER notice announcing its addition to the record and inviting comment shall be published;

(3) The due date for public comments, which shall be at least two weeks prior to the informal hearing for main comments and no more than two weeks after the informal hearing for reply comments;

(4) The name, address and office telephone number of the Record and Hearing Clerk for the rulemaking in question; and

(5) A nonbinding target date for issuing the final rule.

[42 FR 61259, Dec. 1977, as amended at 54 FR 21623, May 19, 1989]

§ 750.3 Record.

(a) No later than the date of proposal of a rule subject to this part, a rulemaking record for that rule shall be established. It shall consist of a separate identified filing space containing:

(1) All documents required by § 750.2(b);

(2) All documents cited in the documents required by § 750.2(b);

(3) all public comments timely received;

(4) All public hearing transcripts;

(5) All material received during an informal hearing and accepted for the record of that hearing; and

(6) Any other information which the Administrator considers to be relevant to such rule and which the Administrator identified, on or before the date of the promulgation of the rule, in a notice published in the FEDERAL REGISTER.

All material in the record shall be appropriately indexed. Each record shall be available for public inspection during normal Agency business hours. Appropriate arrangements allowing members of the public to copy record materials that do not risk the permanent loss of such materials shall be made. All material required to be included in the record shall be added to the record as soon as feasible after its receipt by the Agency.

(b) The Record and Hearing Clerk for each rulemaking shall be responsible for Agency compliance with the requirements of paragraph (a) of this section.

§ 750.4 Public comments.

(a) Main comments shall be postmarked or received no later than the time specified in the Notice of Proposed Rulemaking and shall contain all comments on and criticisms of that Notice by the commenting person, based on information which is or reasonably could have been available to that person at the time.

(b) Reply comments shall be postmarked or received no later than two weeks after the close of all informal hearings on the proposed rule and shall be restricted to comments on:

(1) Other comments;

(2) Material in the hearing record; and

(3) Material which was not and could not reasonably have been available to the commenting party a sufficient time before main comments were due.

(c) Extensions of the time for filing comments may be granted in writing by the Record and Hearing Clerk. Application for an extension shall be made in writing. Comments submitted after the comment period and all extensions of it have expired need not be added to the rulemaking record and need not be considered in decisions concerning the rule. Unless the Notice of Proposed Rulemaking states otherwise, four copies of all comments shall be submitted.

§ 750.5 Subpoenas.

(a) Where necessary, subpoenas requiring the production of documentary material, the attendance of persons at the hearing, or responses to written questions may be issued. Subpoenas may be issued either upon request as provided in paragraph (b) of this section or by EPA on its own motion.

(b) All subpoena requests shall be in writing. Hearing participants may request the issuance of subpoenas as follows:

(1) Subpoenas for the attendance of persons, and for the production of documents or responses to questions at the legislative hearing may be requested at any time up to the deadline for filing main comments.

(2) Subpoenas for production of documents or answers to questions after the legislative hearing may be requested at any time between the beginning of the legislative hearing and the deadline for submitting reply comments.

(c) EPA will rule on all subpoena requests filed under paragraph (b)(1) of this section no later than the beginning of the legislative hearing. Such requests may be granted, denied, or deferred. EPA will rule on all subpoena requests filed under paragraph (b)(2) of this section and all deferred subpoena requests filed under paragraph (b)(1) of this section no later than the promulgation of the final

le. Such requests shall be either
anted or denied.

750.6 Participation in informal hearing.

(a) Each person or organization de-
ring to participate in the informal
earing required by section 6(c)(2)(C)
TSCA shall file a written request to
participate with the Record and
earing Clerk which shall be post-
arked or received no later than three
eeks prior to the scheduled start of
ch hearing. The request shall in-
ude:

(1) A brief statement of the interest
the person or organization in the
roceeding;

(2) A brief outline of the points to be
ddressed;

(3) An estimate of the time required;
nd

(4) If the request comes from an or-
anization, a nonbinding list of the
ersons to take part in the presenta-
on. Organizations are requested to
ring with them, to the extent possi-
le, employees with individual exper-
se in and responsibility for each of
he areas to be addressed. No organiza-
on not filing main comments in the
ulemaking will be allowed to partici-
ate at the hearing, unless a waiver of
his requirement is granted in writing
y the Record and Hearing Clerk or
he organization is appearing at the
equest of EPA or under subpoena.

(b) No later than one week prior to
he start of the hearing, the Record
nd Hearing Clerk shall make a hear-
ng schedule publicly available and
ail or deliver it to each of the per-
ons who requested to appear at the
earing. This schedule shall be subject
o change during the course of the
earing at the discretion of those pre-
iding over it.

(c) Opening statements should be
rief, and restricted either to points
hat could not have been made in
ain comments, or to emphasizing
oints which are made in main com-
ents, but which the participant be-
ieves can be more forcefully urged in
he hearing context.

750.7 Conduct of legislative hearing.

(a) A panel of EPA employees shall
reside at each hearing conducted
nder section 6(c)(2)(C) of TSCA. In appropriate cases other Executive Branch employees may also sit with and assist the panel. The membership of the panel may change as different topics arise during the hearing. In general, the panel membership will consist of agency employees with special responsibility for the final rule or special expertise in the topics under discussion. One member of the panel shall be named to chair the proceedings and shall attend throughout the hearing, unless unavoidably prevented by sickness or similar personal circumstances.

(b) The panel may question any individual or group participating in the hearing on any subject relating to the rulemaking. Cross-examination by others will normally not be permitted at this stage. It may be granted in compelling circumstances at the sole discretion of the hearing panel. However, persons in the hearing audience may submit questions in writing for the hearing panel to ask the participants, and the hearing panel may, at their discretion, ask these questions.

(c) Participants in the hearing may submit additional material for the hearing record and shall submit such additional material as the hearing panel may request. All such submissions shall become part of the record of the hearing. A verbatim transcript of the hearing shall be made.

§ 750.8 Cross-examination.

(a) After the close of the legislative hearing conducted under § 750.7, any participant in that hearing may submit a written request for cross-examination. The request shall be received by EPA within one week after a full transcript of the legislative hearing becomes available and shall specify:

(1) The disputed issue(s) of material fact as to which cross-examination is requested. This shall include an explanation of why the questions at issue are "factual", rather than of an analytical or policy nature, the extent to which they are in "dispute" in the light of the record made thus far, and the extent to which and why they can reasonably be considered "material" to the decision on the final rule; and

(2) The person(s) the participant desires to cross-examine, and an estimate of the time necessary. This shall include a statement by the cross-examination requested can be expected to result in "full and true disclosure" resolving the issue of material fact involved.

(b) Within one week after receipt of all requests for cross-examination under paragraph (a) of this section the hearing panel shall rule on them. The ruling shall be served by the Record and Hearing Clerk on all participants who have requested cross-examination and shall be inserted in the record. Written notice of the ruling shall be given to all persons requesting cross-examination and all persons to be cross-examined. The ruling shall specify:

(1) The issues as to which cross-examination is granted,

(2) The persons to be cross-examined on each issue,

(3) The persons to be allowed to conduct cross-examination, and

(4) Time limits for the examination of each witness by each cross-examiner.

In issuing this ruling, the panel may determine that one or more participants who have requested cross-examination have the same or similar interests and should be required to choose a single representative for purposes of cross-examination. In such a case the order shall simply assign time for cross-examination by that single representative without identifying the representative further. Subpoenas for witnesses may be issued where necessary.

(c) Within one week after the insertion into the record of the ruling under paragraph (b) of this section, the hearing at which the cross-examination will be conducted shall commence. One or more members of the original panel shall preside for the Agency. The panel shall have authority to conduct cross-examination on behalf of any participant, although as a general rule this right will not be exercised. The panel shall also have authority to modify the governing ruling in any respect and to make new rulings on group representation under section 6(c)(3)(C) of TSCA. A verbatim transcript of the hearing shall b made.

(d)(1) No later than the time set fo requesting cross-examination, a hea ing participant may request that othe alternative methods of clarifying th record (such as informal conferenc or the submittal of additional informa tion) be used. Such requests may b submitted either in lieu of cross-exam ination requests, or in conjunctio with them.

(2) The panel in passing on a cros examination request may as a precon dition to ruling on its merits requir that alternative means of clarifyin the record be used whether or no that has been requested under para graph (d)(1) of this section. In such case the results of the use of such al ternative means shall be made avail able to the person requesting cross-ex amination of a one-week commen period, and the panel shall make final ruling on cross-examinatio within one week thereafter.

(e) Waivers or extensions of an deadline in this section applicable t persons other than EPA may be gran ed on the record of the hearing by th person chairing it or in writing by th Record and Hearing Clerk.

§ 750.9 Final rule.

(a) As soon as feasible after th deadline for submittal of reply com ments, the Agency shall issue a fina rule. Final versions of the statement required by paragraph (b) of § 750. shall be published in the FEDERAL REG ISTER together with the final rule. Th Agency shall also publish at that time

(1) A list of all material added to the record (other than public comments and material from the hearng record which has not previously been listed in a FEDERAL REGISTER document, and

(2) The effective date of the rule.

(b) [Reserved]

APPENDIX A TO SUBPART A

To assist in reading the regulations se forth above, this appendix sets forth th principal stages through which rules pr mulgated under section 6 of TSCA will pa

The second column gives the relationsh that one date bears to another whenever that relationship is specified in the regu ns, and cites the governing provision. The rd column contains estimates of the time at a typical rulemaking is likely to require reach and complete each stage of these oceedings. In drawing up this third umn, we have assumed that 60 days will allowed for the submission of main com- ents; that the legislative phase of the in- rmal hearing will take two weeks, and at cross-examination will take four days. ice these are only estimates, in any given lemaking shorter or longer times may ac- ally be required for each of these stages.

Stage	Timing in relation to other stages	Estimated total time elapsed (days)
posed regulation	Sec. 750.2	
quests to articipate in nformal hearing due.	3 weeks prior to beginning of hearing (§ 750.2(a)).	53
in comments due	2 weeks prior to beginning of hearing (§ 750.2(c)(3)).	60
gin informal hearing.		74
d legislative hearing.		88
quests for cross-examination due.	1 week after end of legislative hearing (§ 750.8(a)).	95
ling on cross-examination requests.	1 week after requests are due (§ 750.8(b)).	102
oss-examination begins.	1 week afer ruling on cross-examination requests (§ 750.8(c)).	109
oss-examination ends; informal hearing ends.		113
ply comments due	2 weeks after end of informal hearing (§ 750.4(b)).	127

Subpart B—Interim Procedural Rules for Manufacturing Exemptions

SOURCE: 43 FR 50905, Nov. 1, 1978, unless therwise noted.

750.10 Applicability.

Sections 750.10–750.21 apply to all ulemakings under authority of sec- ion 6(e)(3)(B) of the Toxic Sub- tances Control Act (TSCA), 15 U.S.C. 605(e)(3)(B) with respect to petitions iled pursuant to § 750.11(a) of this art.

750.11 Filing of petitions for exemption.

(a) *Who may file.* Any person seek- ng an exemption from the PCB man- facturing ban imposed by section 6(e)(3)(A) of TSCA may file a petition for exemption. Petitions must be submitted on an individual basis for each manufacturer or individual affected by the 1979 manufacturing ban.

(b) *Petition filing date.* All petitions for exemptions from the 1979 manufacturing ban under section 6(e)(3)(A) must be received by the hearing clerk by December 1, 1978, which is 30 days after publication of this notice.

(c) *Where to file.* All petitions shall be submitted to the following location: TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(d) *Content of petition.* Each petition shall contain the following:

(1) Name, address and telephone number of petitioner.

(2) Description of PCB ban exemption requested, including items to be manufactured and nature of manufacturing process—such as smelting.

(3) Location(s) of manufacturing sites requiring exemption.

(4) Length of time requested for exemption (maximum length of exemption is 1 year).

(5) Amount of PCB chemical substance or PCB mixture (by pounds and/or volume) to be manufactured or used during requested exemption period and the manner of release of PCB's into the environment associated with such manufacture or use.

(6) The basis for the petitioner's contention that under section 6(e)(3)(B)(i) of TSCA "an unreasonable risk of injury to health or environment would not result" from the granting of his petition for exemption.

(7) The basis for the petitioner's contention that he meets the criterion of section 6(e)(3)(B)(ii) of TSCA concerning substitutes for PCB's.

(8) Quantification of the reasonably ascertainable economic consequences of denial of the petition for exemption from the 1979 manufacturing ban and an explanation of the manner of computation.

The Agency reserves the right to request further information as to each petition prior to or after publication of the notice of proposed rulemaking required by § 750.13 of these rules.

[43 FR 50905, Nov. 1, 1978, as amended at 53 FR 12524, Apr. 15, 1988]

§ 750.12 Consolidation of rulemakings.

All petitions received pursuant to § 750.11(a) will be consolidated into one rulemaking with one informal hearing held on all petitions.

§ 750.13 Notice of proposed rulemaking.

Rulemaking for PCB exemptions filed pursuant to § 750.11(a) shall begin with the publication of a notice of proposed rulemaking in the FEDERAL REGISTER. The notice shall state in summary form the required information described in § 750.11(d). Due to time constraints, the notice need not indicate what action EPA proposes to take on the exemption petitions. The notice shall also be subject to § 750.2(c) with the exceptions (1) that the clause "in addition to the material required under paragraph (b)" is eliminated; and (2) that § 750.2(c)(3) is changed to read:

> The due date for public comments, which shall be (1) thirty days after publication of the notice of proposed rulemaking for main comments and (2) one week after the close of the informal hearing for reply comments.

§ 750.14 Record.

Section 750.3 shall be applicable with the exception that the words "§ 750.11(d)" are substituted for "§ 750.2(b)" in § 750.3(a)(1) and (2).

§ 750.15 Public comments.

Section 750.4 shall be applicable with the exception that the time period in § 750.4(b) is shortened to 1 week.

§ 750.16 Confidentiality.

The Agency encourages the submission of nonconfidential information by petitioners and commenters. The Agency does not wish to have unnecessary restrictions on access to the rulemaking record. However, if a petitioner or commenter believes that he can only state his position through the use of information claimed to be confidential, he may submit it. Such information must be separately submitted for the rulemaking record and marked "confidential" by the submitter. For the information claimed to be confidential, the Agency will list only the date and the name and address of the petitioner or commenter in the public file, noting that the petitioner or commenter has requested confidential treatment. The information claimed to be confidential will be placed in a confidential file. A petitioner must also file a nonconfidential petition with a nonconfidential summary of the confidential information to be placed in the public file. Similarly, a commenter must supply a nonconfidential summary of the information claimed to be confidential to be placed in the public file. Any information not marked as confidential will be placed in the public file. Information marked confidential will be treated in accordance with the procedures in Part 2, subpart B of this title.

§ 750.17 Subpoenas.

Section 750.5 shall be applicable.

§ 750.18 Participation in informal hearing.

(a) Each person or organization desiring to participate in the informal hearing required by section 6(c)(2)(C) of TSCA shall file a written request to so participate with the record and hearing clerk which shall be received no later than 7 days prior to the scheduled start of the hearing. The hearing shall begin 7 days after the close of the 30-day comment period or as soon thereafter as practicable.

(b) With the exception of the first sentence in § 750.6(a), § 750.6 shall be applicable with the further exception that the time period in § 750.6(b) is shortened to no later than 3 days prior to the start of the hearing.

§ 750.19 Conduct of informal hearing.

Section 750.7 shall be applicable with the addition of the following sentence at the end of § 750.7(c):

> Participants shall be allowed to designate testimony from prior EPA informal rulemaking hearings concerning PCB's under TSCA. The hearing panel may reject repetative testimony previously presented at such hearings.

0.20 Cross-examination.

ection 750.8 shall be applicable.

0.21 Final rule.

) As soon as feasible after the
dline for submittal of reply com-
nts, the Agency shall issue a final
e. The Agency shall also publish at
t time:

1) A list of all material added to the
ord (other than public comments
l material from the hearing record)
ich has not previously been listed in
EDERAL REGISTER document, and

2) The effective date of the rule.

) The Administrator hereby dele-
es final Agency authority to grant
deny petitions under section
)(3)(B) of TSCA submitted pursu-
; to § 750.11 of these rules to the
sisitant Administrator for Toxic
bstances. The Assistant Administra-
shall act on such petitions subse-
ent to opportunity for an informal
aring pursuant to these rules.

c) In determining whether to grant
exemption to the PCB ban, the
ency shall apply the two standards
unciated in section 6(e)(3)(B) of
CA.

bpart C—Interim Procedural Rules for Processing and Distribution in Commerce Exemptions

SOURCE: 44 FR 31560, Mar. 31, 1979, unless
herwise noted.

50.30 Applicability.

Sections 750.30–750.41 apply to all
lemakings under authority of sec-
n 6(e)(3)(B) of the Toxic Sub-
ances Control Act (TSCA), 15 U.S.C.
05(e)(3)(B) with respect to petitions
r PCB processing and distribution in
mmerce exemptions filed pursuant
§ 750.31(a) of this part.

50.31 Filing of petitions for exemption.

a) *Who may file.* Any person seek-
g an exemption from the PCB proc-
sing and distribution in commerce
ohibitions imposed by section
e)(3)(A)(ii) of TSCA may file a peti-
on for exemption. Petitions must be
bmitted on an individual basis for
ch processor, distributor, seller or
dividual affected by the 1979 processing and distribution in commerce prohibitions, except as described in paragraphs (a)(1) through (9) of this section.

(1) *Processing and distribution in commerce of PCB-contaminated transformer dielectric fluid.* Persons who process or distribute in commerce dielectric fluid containing 50 ppm or greater PCB (but less than 500 ppm PCB) for use in PCB-Contaminated Transformers may submit a single consolidated petition on behalf of any number of petitioners. The name and address of each petitioner must be stated in the petition.

(2) *Contaminated substances and mixtures—processing.* Persons who process the same chemical substance or the same mixture containing 50 ppm or greater PCB as an impurity or contaminant may submit a consolidated petition if the chemical substance or mixture is processed for the same use by each person represented by the petition. For example, persons who process a PCB-contaminated pigment into printing inks may combine their petitions into one petition. The name and address of each petitioner must be stated in the petition.

(3) *Contaminated substances and mixtures—distribution in commerce.* Persons who distribute in commerce the same chemical substance or the same mixture containing 50 ppm or greater PCB as an impurity or contaminant may submit a consolidated petition if the chemical substance or mixture is distributed in commerce for a common use. Such a petition is not required to name each person who distributes in commerce the chemical substance or mixture.

(4) *PCB capacitor distribution for purposes of repair.* Persons who distribute in commerce PCB capacitors for servicing (repair) of PCB Equipment may submit a single consolidated petition on behalf of any number of petitioners engaged in such distribution in commerce for purposes of repair. The name of each petitioner need not be stated in the petition.

(5) *Small quantities for research and development.* Persons who process or distribute in commerce small quantities of PCBs for research and development may submit a single consolidated

petition. The name and address of each petitioner must be stated in the petition.

(6) *Microscopy.* Persons who process or distribute in commerce PCBs for use as a mounting medium in microscopy may submit a single consolidated petition on behalf of any number of petitioners. The name and address of each petitioner must be stated in the petition.

(7) *Processing of PCB Articles into PCB Equipment.* A person who processes (incorporates) PCB Articles (such as small PCB Capacitors) into PCB Equipment may submit a petition on behalf of himself and all persons who further process or distribute in commerce PCB Equipment built by the petitioner. For example, a builder of motors who places small PCB Capacitors in the motors may submit a petition on behalf of all persons who process or incorporate motors built by the petitioner into other pieces of PCB Equipment and all those who sell the equipment. Such a petition is not required to identify the persons who distribute in commerce or further process the PCB Equipment. A separate petition must be filed, however, by each processor of PCB Articles into PCB Equipment.

(8) *Processing of PCB Equipment into other PCB Equipment.* A person who processes (incorporates) PCB Equipment into other PCB Equipment may submit a petition on behalf of himself and all persons who further process or distribute in commerce PCB Equipment built by the petitioner. Such a petition is not required to identify the persons who distribute in commerce or further process the PCB Equipment. If a petition has been filed under paragraph (a)(7) of this section by the builder of the original PCB Equipment, no other petition is required.

(9) *Distribution of PCB Equipment.* Distributors in commerce of PCB Equipment may submit a consolidated petition on behalf of persons who distribute in commerce PCB Equipment of one type (such as air conditioners). The petition is not required to name the persons who distribute in commerce the affected PCB Equipment.

(b) *Petition filing date.* All peti
for exemptions from the 1979 pro
ing and distribution in commerce
hibitions under section 6(e)(3)(
must be received by the Hearing
by July 2, 1979.

(c) *Where to file.* All petitions
be submitted to the following loca
TSCA Document Processing Ce
(TS-790), Rm. L-100, Office of
Substances, Environmental Prote
Agency, 401 M St., SW., Washin
DC 20460.

(d) *Content of petition.* Each
tion must contain the following:

(1) Name, address and telep
number of petitioner. See also
graphs (a)(1) through (9) of this
tion for additional identificatio
quirements applicable to certain
solidated petitions.

(2) Description of PCB processi
distribution in commerce exem
requested, including a descriptio
the chemical substances, mixtur
items to be processed or distribut
commerce and, if processing i
volved, the nature of the processin

(3) For processing petit
location(s) of sites requiring ex
tion.

(4) Length of time requested fo
emption (maximum length of ex
tion is one year).

(5) Estimated amount of PCBs
pound and/or volume) to be proce
distributed in commerce, or
during requested exemption p
and the manner of release of
into the environment associated
such processing, distribution in
merce, or use. Where the PCB co
tration is less than 500 ppm, both
total liquid volume and the total
volume must be provided.

(6) The basis for the petitio
contention that under se
6(e)(3)(B)(i) of TSCA "an unre
able risk of injury to health or
ronment would not result" from
granting of the petition for ex
tion.

(7) The basis for the petitio
contention that under se
6(e)(3)(B)(ii) "good faith efforts
been made to develop a chemical
stance which does not present a
reasonable risk of injury to healt

the environment and which may be substituted for" the PCB.

(8) Quantification of the reasonably ascertainable economic consequences of denying the petition for exemption and an explanation of the manner of computation.

(9) In addition to the information in paragraphs (d)(1) through (8) of this section, certain petitions must contain additional information as follows:

(i) Persons who process or distribute in commerce dielectric fluids containing 50 ppm or greater PCB for use in PCB Transformers, railroad transformers, or PCB electromagnets must also state the expected number of PCB Transformers, railroad transformers, or PCB electromagnets to be serviced under the exemption. In addition, a person must identify all the facilities which he owns or operates where he services PCB transformers, railroad transformers, or PCB electromagnets.

(ii) Persons filing petitions under paragraph (a)(1) of this section (Processing and Distribution in Commerce of PCB-Contaminated Transformer Dielectric Fluid) must also provide the expected number of PCB-Contaminated Transformers to be serviced under the requested exemption and the expected method of disposal of waste dielectric fluid. In addition, a person must identify all the facilities which he owns or operates where he services PCB-Contaminated Transformers. This information, as well as the information required by paragraphs (d)(1), (3) and (5) of this section, must be provided for each person represented by the petition. All other information may be provided on a group basis.

(iii) Persons filing petitions under paragraphs (a)(2) (Contaminated Substances and Mixtures-Processing) and (a)(3) (Contaminated Substances and Mixtures-Distribution in Commerce) must also provide a justification for the class grouping selected and a description of the uses and the human and environmental exposure associated with each use of the PCB-contaminated chemical substance or mixture for which an exemption is sought. Information may be provided on a group basis, except that the information required by paragraphs (d)(1), (3) and (5) of this section, must be provided for each person represented by a petition under paragraph (a)(2) of this section.

(iv) Persons filing petitions under paragraph (a)(4) of this section (PCB Capacitor Distribution for Purposes of Repair) must also provide an estimate of the expected total number of PCB Capacitors to be distributed in commerce under the requested exemption. All information may be provided on a group basis.

(v) Persons filing petitions under paragraphs (a) (7) and (8) of this section (Processing of PCB Articles into PCB Equipment and Processing of PCB Equipment into Other PCB Equipment) must provide a description of each type of PCB Equipment (including the amount of PCBs by poundage and/or volume in the PCB Equipment) to be processed and/or distributed in commerce under the exemption, the number of each type of equipment expected to be processed and/or distributed in commerce, and the approximate number of distributors or further processors covered by the petition. All information may be provided on a group basis. However, in the case of a petition under paragraph (a)(7) of this section, the processor of PCB Articles into PCB Equipment must be identified in the petition. In the case of a petition under paragraph (a)(8) of this section, the processor of PCB Equipment who files the petition must be identified.

(vi) Persons filing petitions under paragraph (a)(9) of this section (Distribution of PCB Equipment) must provide a description of each type of PCB Equipment (including the amount of PCBs by poundage and/or volume in the PCB Equipment) to be distributed in commerce under the exemption, the number of each type of equipment to be distributed in commerce, and the approximate number of distributors covered by the petition. All information may be provided on a group basis.

(vii) Persons filing petitions under paragraphs (a)(5) and (6) of this section must provide the information required by paragraphs (d)(1) through (8) of this section for each petitioner named in the petition.

(e) EPA reserves the right to request further information as to each petition where necessary to determine whether the petition meets the statutory tests of section 6(e)(3)(B) of TSCA prior to or after publication of the notice of proposed rulemaking required by § 750.33 of these rules.

[44 FR 31560, Mar. 31, 1979, as amended at 53 FR 12524, Apr. 15, 1988]

§ 750.32 Consolidation of rulemaking.

All petitions received pursuant to § 750.31(a) will be consolidated into one rulemaking with one informal hearing held on all petitions.

§ 750.33 Notice of proposed rulemaking.

Rulemaking for PCB processing and distribution in commerce exemptions filed pursuant to § 750.31(a) will begin with the publication of a Notice of Proposed Rulemaking in the FEDERAL REGISTER. Each notice will contain:

(a) A summary of the information required in §750.31(d);

(b) A statement of the time and place at which the informal hearing required by section 6(c)(2)(C) of TSCA shall begin, or, to the extent these are not specified, a statement that they will be specified later in a separate FEDERAL REGISTER notice provided that FEDERAL REGISTER notice of the date and city at which any informal hearing shall begin will be given at least 30 days in advance;

(c) A statement identifying the place at which the official record of the rulemaking is located, the hours during which it will be open for public inspection, the documents contained in it as of the date the Notice of Proposed Rulemaking was issued, and a statement of the approximate times at which additional materials such as public comments, hearing transcripts, and Agency studies in progress will be added to the record. If any material other than public comments or material generated by a hearing is added to the record after publication of the notice required by this action, and notice of its future addition was not given at the time of that initial publication, a separate FEDERAL REGISTER notice announcing its addition to the record and inviting comment will be published;

(d) The due date for public ments, which will be (1) 30 day publication of the notice of pr rulemaking for main comment (2) one week after the informal ing for reply comments;

(e) The name, address, and telephone number of the Record and the Hearing Clerk for the making in question; and

(f) A nonbinding target date fo ing the final rule.

§ 750.34 Record.

(a) No later than the date of p al of a rule subject to this subp rulemaking record for that rule established. It will consist of a rate identified filing space conta

(1) All documents require § 750.31(d);

(2) All public comments time ceived;

(3) All public hearing transcrip

(4) All material received duri informal hearing and accepted f record of that hearing; and

(5) Any other information th Assistant Administrator for Toxi stances considers to be releva such rule and that the Assista ministrator identified, on or befo date of the promulgation of the in a notice published in the F REGISTER.

(b) All material in the record appropriately indexed. Each will be available for public insp during normal EPA business Appropriate arrangements all members of the public to copy materials that do not risk the p nent loss of such materials w made. All material required to cluded in the record will be add the record as soon as feasible af receipt by EPA.

(c) The Record Clerk for each making will be responsible for compliance with the requireme paragraph (a) of this section.

§ 750.35 Public comments.

(a) Main comments must be marked or received no later tha time specified in the Notice o posed Rulemaking and must c all comments on and criticisms o

Notice by the commenting person, based on information which is or reasonably could have been available to that person at the time.

(b) Reply comments must be postmarked or received no later than one week after the close of all informal hearings on the proposed rule and must be restricted to comments on:

(1) Other comments;

(2) Material in the hearing record; and

(3) Material which was not, and could not reasonably have been available to the commenting party a sufficient time before main comments were due.

(c) Extensions of the time for filing comments may be granted in writing by the Hearing Chairman. Application for an extension must be made in writing. Comments submitted after the comment period and all extensions of it have expired need not be added to the rulemaking record and need not be considered in decisions concerning the rule.

(d) Unless the Notice of Proposed Rulemaking states otherwise, four copies of all comments must be submitted.

§ 750.36 Confidentiality.

EPA encourages the submission of non-confidential information by petitioners and commentors. EPA does not wish to have unnecessary restrictions on access to the rulemaking record. However, if a petitioner or commentor believes that he can only state his position through the use of information claimed to be confidential, he may submit it. Such information must be separately submitted for the rulemaking record and marked "confidential" by the submitter. For the information claimed to be confidential, EPA will list only the date and the name and address of the petitioner or commentor in the public file, noting that the petitioner or commentor has requested confidential treatment. The information claimed to be confidential will be placed in a confidential file. A petitioner must also file a non-confidential petition with a non-confidential summary of the confidential information to be placed in the public file. Similarly, a commentor must supply a non-confidential summary of the information claimed to be confidential to be placed in the public file. Any information not marked as confidential will be placed in the public file. Information marked confidential will be treated in accordance with the procedures in Part 2, subpart B of this title.

§ 750.37 Subpoenas.

(a) Where necessary, subpoenas requiring the production of documentary material, the attendance of persons at the hearing, or responses to written questions may be issued. Subpoenas may be issued either upon request as provided in paragraph (b) of this section or by EPA on its own motion.

(b) All subpoena requests must be in writing. Hearing participants may request the issuance of subpoenas as follows:

(1) Subpoenas for the attendance of persons or for the production of documents or responses to questions at the legislative hearing may be requested at any time up to the deadline for filing main comments.

(2) Subpoenas for production of documents or answers to questions after the legislative hearing may be requested at any time between the beginning of the legislative hearing and the deadline for submitting reply comments.

(c) EPA will rule on all subpoena requests filed under paragraph (b)(1) of this section no later than the beginning of the informal hearing. Such requests may be granted, denied, or deferred. EPA will rule on all subpoena requests filed under paragraph (b)(2) of this section and all deferred subpoena requests filed under paragraph (b)(1) of this section no later than the promulgation of the final rule. Such requests will be either granted or denied.

§ 750.38 Participation in informal hearing.

(a) Each person or organization desiring to participate in the informal hearing required by section 6(c)(2)(C) of TSCA must file a written request to participate with the Hearing Clerk. This request must be received no later than seven days prior to the scheduled start of the hearing. The hearing will begin seven days after the close of the thirty day comment period or as soon thereafter as practicable. The request must include:

(1) A brief statement of the interest of the person or organization in the proceeding;

(2) A brief outline of the points to be addressed;

(3) An estimate of the time required; and

(4) If the request comes from an organization, a nonbinding list of the persons to take part in the presentation. Organizations are requested to bring with them, to the extent possible, employees with individual expertise in and responsibility for each of the areas to be addressed. No organization not filing main comments in the rulemaking will be allowed to participate at the hearing, unless a waiver of this requirement is granted in writing by the Hearing Chairman or the organization is appearing at the request of EPA or under subpoena.

(b) No later than three days prior to the start of the hearing, the Hearing Clerk will make a hearing schedule publicly available and mail or deliver it to each of the persons who requested to appear at the hearing. This schedule will be subject to change during the course of the hearing at the discretion of those presiding over it.

(c) Opening statements should be brief, and restricted either to points that could not have been made in main comments or to emphasizing points which are made in main comments, but which the participant believes can be more forcefully urged in the hearing context.

§ 750.39 Conduct of informal hearing.

(a) A panel of EPA employees shall preside at each hearing conducted under section 6(c)(2)(C) of TSCA. In appropriate cases, other Executive Branch employees may also sit with and assist the panel. The membership of the panel may change as different topics arise during the hearing. In general, the panel membership will consist of EPA employees with special responsibility for the final rule or special expertise in the topics under discussion. One member of the panel will be named to chair the proceedings will attend throughout the hear unless unavoidably prevented by ness or similar personal circumstan

(b) The panel may question any vidual or group participating in hearing on any subject relating to rulemaking. Cross-examination others will normally not be permit at this stage. It may be granted compelling circumstances at the discretion of the hearing panel. ever, persons in the hearing audie may submit questions in writing the hearing panel to ask the part pants, and the hearing panel may, their discretion, ask these questions

(c) Participants in the hearing submit additional material for hearing record and shall submit additional material as the hear panel may request. All such sub sions will become part of the record the hearing. A verbatim transcript the hearing shall be made. Part pants will be allowed to designate timony from prior EPA informal making hearings concerning PC under TSCA. The hearing panel reject repetitive testimony previou presented at such hearings.

§ 750.40 Cross-examination.

(a) After the close of the infor hearing conducted under § 750.39, participant in that hearing submit a written request for cross- amination. The request must be ceived by EPA within one week afte full transcript of the informal hear becomes available and must specify:

(1) The disputed issue(s) of mater fact as to which cross-examination requested. This must include an ex nation of why the questions at is are "factual", rather than of an lytical or policy nature, the extent which they are in "dispute" in light of the record made thus far, the extent to which and why they reasonably be considered "material" the decision on the final rule; and

(2) The person(s) the participant sires to cross-examine, and an estim of the time necessary. This must clude a statement as to how the cr examination requested can be exp ed to result in "full and true dis

sure" resolving the issue of material fact involved.

(b) Within one week after receipt of all requests for cross-examination under paragraph (a), the hearing panel will rule on them. The ruling will be served by the Hearing Clerk on all participants who have requested cross-examination and will be inserted in the record. Written notice of the ruling will be given to all persons requesting cross-examination and all persons to be cross-examined. The ruling will specify:

(1) The issues as to which cross-examination is granted;

(2) The persons to be cross-examined on each issue;

(3) The persons to be allowed to conduct cross-examination; and

(4) Time limits for the examination of each witness by each cross-examiner.

(c) In issuing this ruling, the panel may determine that one or more participants who have requested cross-examination have the same or similar interests and should be required to choose a single representative for purposes of cross-examination by that single representative without identifying the representative further. Subpoenas for witnesses may be issued where necessary.

(d) Within one week after the insertion into the record of the ruling under paragraph (b) of this section, the hearing at which the cross-examination will be conducted will begin. One or more members of the original panel will preside for EPA. The panel will have authority to conduct cross-examination on behalf of any participant, although as a general rule this right will not be exercised. The panel will also have authority to modify the governing ruling in any respect and to make new rulings on group representation under section 6(c)(3)(C) of TSCA. A verbatim transcript of the hearing will be made.

(e)(1) No later than the time set for requesting cross-examination, a hearing participant may request that other alternative methods of clarifying the record (such as informal conferences or the submittal of additional information) be used. Such requests may be submitted either in lieu of cross-examination requests, or in conjunction with them.

(2) The panel in passing on a cross-examination request may, as a precondition to ruling on its merits, require that alternative means of clarifying the record be used whether or not that has been requested under paragraph (e)(1) of this section. In such a case, the results of the use of such alternative means will be made available to the person requesting cross-examination for a one-week comment period, and the panel will make a final ruling on cross-examination within one week thereafter.

(f) Waivers or extensions of any deadline in this section applicable to persons other than EPA may be granted on the record of the hearing by the person chairing it or in writing by the Hearing Chairman.

§ 750.41 Final rule.

(a) As soon as feasible after the deadline for submittal of reply comments, EPA will issue a final rule. EPA will also publish at that time:

(1) A list of all material added to the record (other than public comments and material from the hearing record) which has not previously been listed in a FEDERAL REGISTER document, and

(2) The effective date of the rule.

(b) Pursuant to the delegation of authority made in the Preamble to the Final Regulation for the PCB Manufacturing, Processing, Distribution in Commerce and Use Prohibitions, the Assistant Administrator for Toxic Substances will grant or deny petitions under section 6(e)(3)(B) of TSCA submitted pursuant to § 750.31. The Assistant Administrator will act on such petitions subsequent to opportunity for an informal hearing pursuant to this rule.

(c) In determining whether to grant an exemption to the PCB ban, EPA will apply the two standards enunciated in section 6(e)(3)(B) of TSCA.

PART 761—POLYCHLORINATED BIPHENYLS (PCBs) MANUFACTURING, PROCESSING, DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS

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AUTHORITY: 15 U.S.C. 2605,
2611, 2614, and 2616.

Subpart A—General

§ 761.1 Applicability.

(a) This part establishes prohibi
of, and requirements for, the man
ture, processing, distribution in
merce, use, disposal, storage,
marking of PCBs and PCB Items.

(b) This part applies to all pe
who manufacture, process, distri
in commerce, use, or dispose of
or PCB Items. Substances that
regulated by this rule include, bu
not limited to, dielectric fluids,
taminated solvents, oils, waste
heat transfer fluids, hydraulic f
paints, sludges, slurries, dredge s
soils, materials contaminated
result of spills, and other che
substances or combination of
stances, including impurities an
products and any byproduct, inte
diate or impurity manufactured a
point in a process. Most of the
sions of this part apply to PCBs
if PCBs are present in concentra
above a specified level. For exa
subpart D applies generally to m
als at concentrations of 50 parts
million (ppm) and above. Also ce
provisions of subpart B apply to
inadvertently generated in man
turing processes at concentra
specified in the definition of "
under § 761.3. No provision speci

a PCB concentration may be avoided as a result of any dilution, unless otherwise specifically provided.

(c) Definitions of the terms used in these regulations are in subpart A. The basic requirements applicable to disposal and marking of PCBs and PCB Items are set forth in subpart D—Disposal of PCBs and PCB Items and in subpart C—Marking of PCBs and PCB Items. Prohibitions applicable to PCB activities are set forth in subpart B—Manufacture, Processing, Distribution in Commerce, and Use of PCBs and PCB Items. Subpart B also includes authorizations from the prohibitions. Subparts C and D set forth the specific requirements for disposal and marking of PCBs and PCB Items.

(d) Section 15 of the Toxic Substances Control Act (TSCA) states that failure to comply with these regulations is unlawful. Section 16 imposes liability for civil penalties upon any person who violates these regulations, and the Administrator can establish appropriate remedies for any violations subject to any limitations included in section 16 of TSCA. Section 16 also subjects a person to criminal prosecution for a violation which is knowing or willful. In addition, section 17 authorizes Federal district courts to enjoin activities prohibited by these regulations, compel the taking of actions required by these regulations, and issue orders to seize PCBs and PCB Items manufactured, processed or distributed in violation of these regulations.

(e) These regulations do not preempt other more stringent Federal statutes and regulations.

(f) Unless and until superseded by any new more stringent regulations issued under EPA authorities, or any permits or any pretreatment requirements issued by EPA, a state or local government that affect release of PCBs to any particular medium:

(1) Persons who inadvertently manufacture or import PCBs generated as unintentional impurities in excluded manufacturing processes, as defined in § 761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(2) Persons who process, distribute in commerce, or use products containing PCBs generated in excluded manufacturing processes defined in § 761.3 are exempt from the requirements of subpart B provided that such persons comply with subpart J of this part, as applicable.

(3) Persons who process, distribute in commerce, or use products containing recycled PCBs defined in § 761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(4) Except as provided in § 761.20 (d) and (e), persons who process, distribute in commerce, or use products containing excluded PCB products as defined in § 761.3, are exempt from the requirements of subpart B of this part.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

[44 FR 31542, May 31, 1979, as amended at 49 FR 28189, July 10, 1984; 53 FR 24220, June 27, 1988]

§ 761.3 Definitions.

For the purpose of this part:

"Administrator" means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions.

"Agency" means the United States Environmental Protection Agency.

"Annual document log" means the detailed information maintained at the facility on the PCB waste handling at the facility.

"Annual report" means the written document submitted each year by each disposer and commercial storer of PCB waste to the appropriate EPA Regional Administrator. The annual report is a brief summary of the information included in the annual document log.

"Byproduct" means a chemical substance produced without separate commercial intent during the manufacturing or processing of another chemical substance(s) or mixture(s).

"Capacitor" means a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

(1) "Small capacitor" means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kgs (3 lbs.) of dielectric fluid and a capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg (3 lbs.) of dielectric fluid. A capacitor whose volume is between 1,639 and 3,278 cubic centimeters may be considered to contain less then 1.36 kg (3 lbs.) of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lbs.).

(2) "Large high voltage capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates at 2,000 volts (a.c. or d.c.) or above.

(3) "Large low voltage capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates below 2,000 volts (a.c. or d.c.).

"Certification" means a written statement regarding a specific fact or representation that contains the following language:

> Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

"Chemical substance", (1) except as provided in paragraph (2) of this definition, means any organic or inorganic substance of a particular molecular identity, including: Any combination of such substances occurring in whole or part as a result of a chemical reaction or occurring in nature, and any element or uncombined radical.

(2) Such term does not include: Any mixture; any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act); any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or section 4221 or any provisions of such Code); and any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

"Chemical waste landfill" means a landfill at which protection against risk of injury to health or the environment from migration of PCBs to land, water, or the atmosphere is provided from PCBs and PCB Items deposited therein by locating, engineering, and operating the landfill as specified in § 761.75.

"Commerce" means trade, traffic, transportation, or other commerce:

(1) Between a place in a State and any place outside of such State, or

(2) Which affects trade, traffic, transportation, or commerce described in paragraph (1) of this definition.

"Commercial storer of PCB waste" means the owner or operator of each facility which is subject to the PCB storage facility standards of § 761.65, and who engages in storage activities involving PCB waste generated by others, or PCB waste that was removed while servicing the equipment owned by others and brokered for disposal. The receipt of a fee or any other form of compensation for storage services is not necessary to qualify as a commercial storer of PCB waste. It is sufficient under this definition that the facility stores PCB waste generated by others or the facility removed the PCB waste while servicing equipment owned by others. A generator who stores only the generator's own waste is subject to the storage requirements of § 761.65, but is not required to seek approval as a commercial storer. If a facility's storage of PCB waste at no time exceeds 500 liquid gallons of PCBs, the owner or operator is not required to seek approval as a commercial storer of PCB waste.

"Designated facility" means the off-site disposer or commercial storer of PCB waste designated on the manifest as the facility that will receive a manifested shipment of PCB waste.

"Disposal" means intentionally or accidentally to discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB Items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB Items.

"Disposer of PCB waste," as the term is used in subparts J and K of this part, means any person who owns or operates a facility approved by EPA for the disposal of PCB waste which is regulated for disposal under the requirements of subpart D of this part.

"Distribute in commerce" and "Distribution in Commerce" when used to describe an action taken with respect to a chemical substance, mixture, or article containing a substance or mixture means to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or to hold or the holding of, the substance, mixture, or article after its introduction into commerce.

"Emergency Situation" for continuing use of a PCB Transformer exists when:

(1) Neither a non-PCB Transformer nor a PCB-Contaminated transformer is currently in storage for reuse or readily available (i.e., available within 24 hours) for installation.

(2) Immediate replacement is necessary to continue service to power users.

"EPA identification number" means the 12-digit number assigned to a facility by EPA upon notification of PCB waste activity under § 761.205.

"Excluded manufacturing process" means a manufacturing process in which quantities of PCBs, as determined in accordance with the definition of inadvertently generated PCBs, calculated as defined, and from which releases to products, air, and water meet the requirements of paragraphs (1) through (5) of this definition, or the importation of products containing PCBs as unintentional impurities, which products meet the requirements of paragraphs (1) and (2) of this definition.

(1) The concentration of inadvertently generated PCBs in products leaving any manufacturing site or imported into the United States must have an annual average of less than 25 ppm, with a 50 ppm maximum.

(2) The concentration of inadvertently generated PCBs in the components of detergent bars leaving the manufacturing site or imported into the United States must be less than 5 ppm.

(3) The release of inadvertently generated PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of inadvertently generated PCBs added to water discharged from a manufacturing site must be less than 100 micrograms per resolvable gas chromatographic peak per liter of water discharged.

(5) Disposal of any other process wastes above concentrations of 50 ppm PCB must be in accordance with subpart D of this part.

"Excluded PCB products" means PCB materials which appear at concentrations less than 50 ppm, including but not limited to:

(1) Non-Aroclor inadvertently generated PCBs as a byproduct or impurity resulting from a chemical manufacturing process.

(2) Products contaminated with Aroclor or other PCB materials from historic PCB uses (investment casting waxes are one example).

(3) Recycled fluids and/or equipment contaminated during use involving the products described in paragraphs (1) and (2) of this definition (heat transfer and hydraulic fluids and equipment and other electrical equipment components and fluids are examples).

(4) Used oils, provided that in the cases of paragraphs (1) through (4) of this definition:

(i) The products or source of the products containing < 50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

(ii) The products or source of the products containing < 50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;

(iii) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm.

"Fluorescent light ballast" means a device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

"Generator of PCB waste" means any person whose act or process produces PCBs that are regulated for disposal under subpart D of this part, or whose act first causes PCBs or PCB Items to become subject to the disposal requirements of subpart D of this part, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated and therefore is subject to the disposal requirements of subpart D of this part. Unless another provision of this part specifically requires a site-specific meaning, "generator of PCB waste" includes all of the sites of PCB waste generation owned or operated by the person who generates PCB waste.

"Impurity" means a chemical substance which is unintentionally present with another chemical substance.

"In or Near Commercial Buildings" means within the interior of, on the roof of, attached to the exterior wall of, in the parking area serving, or within 30 meters of a non-industrial non-substation building. Commercial buildings are typically accessible to both members of the general public and employees, and include: (1) Public assembly properties, (2) educational properties, (3) institutional properties, (4) residential properties, (5) stores, (6) office buildings, and (7) transportation centers (e.g., airport terminal buildings, subway stations, bus stations, or train stations).

"Incinerator" means an engineered device using controlled flame combustion to thermally degrade PCBs and PCB Items. Examples of devices used for incineration include rotary kilns, liquid injection incinerators, cement kilns, and high temperature boilers.

"Industrial building" means a building directly used in manufacturing or technically productive enterprises. Industrial buildings are not generally or typically accessible to other than workers. Industrial buildings include buildings used directly in the production of power, the manufacture of products, the mining of raw materials, and the storage of textiles, petroleum products, wood and paper products, chemicals, plastics, and metals.

"Laboratory" means a facility that analyzes samples for PCBs and is unaffiliated with any entity whose activities involve PCBs.

"Leak" or "leaking" means any instance in which a PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.

"Manifest" means the shipping document EPA form 8700-22 and any continuation sheet attached to EPA form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form and subpart K of this part.

"Manned Control Center" means an electrical power distribution control room where the operating conditions of a PCB Transformer are continuously monitored during the normal hours of operation (of the facility), and where the duty engineers, electricians or other trained personnel have the capability to deenergize a PCB Transformer completely within 1 minute of

ıe receipt of a signal indicating ab-
ormal operating conditions such as
ı overtemperature condition or over-
essure condition in a PCB Trans-
rmer.

"Manufacture" means to produce,
anufacture, or import into the cus-
ms territory of the United States.

"Manufacturing process" means all
a series of unit operations operating
a site, resulting in the production of
product.

"Mark" means the descriptive name,
structions, cautions, or other infor-
ation applied to PCBs and PCB
ems, or other objects subject to
ese regulations.

"Marked" means the marking of
CB Items and PCB storage areas and
ansport vehicles by means of apply-
g a legible mark by painting, fixa-
on of an adhesive label, or by any
her method that meets the require-
ents of these regulations.

"Market/Marketers" means the
ocessing or distributing in com-
erce, or the person who processes or
stributes in commerce, used oil fuels
burners or other marketers, and
ay include the generator of the fuel
it markets the fuel directly to the
rner.

"Mineral Oil PCB Transformer"
eans any transformer originally de-
gned to contain mineral oil as the di-
ectric fluid and which has been
sted and found to contain 500 ppm
greater PCBs.

"Mixture" means any combination
two or more chemical substances if
e combination does not occur in
ture and is not, in whole or in part,
e result of a chemical reaction;
cept that such term does include
y combination which occurs, in
hole or in part, as a result of a chem-
l reaction if none of the chemical
bstances comprising the combina-
on is a new chemical substance and if
e combination could have been man-
actured for commercial purposes
thout a chemical reaction at the
ne the chemical substances compris-
g the combination were combined.

"Municipal solid wastes" means gar-
ge, refuse, sludges, wastes, and
her discarded materials resulting
om residential and non-industrial op-
ations and activities, such as household activities, office functions, and commercial housekeeping wastes.

"Non-PCB Transformer" means any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB Transformer or a PCB-Contaminated transformer cannot be classified as a non-PCB Transformer until reclassification has occurred, in accordance with the requirements of § 761.30(a)(2)(v).

"On site" means within the boundaries of a contiguous property unit.

"PCB" and "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. Refer to § 761.1(b) for applicable concentrations of PCBs. PCB and PCBs as contained in PCB items are defined in § 761.3. For any purposes under this part, inadvertently generated non-Aroclor PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5.

"PCB Article" means any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. "PCB Article" includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB Article.

"PCB Article Container" means any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.

"PCB Container" means any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surface(s) has been in direct contact with PCBs.

"PCB-Contaminated Electrical Equipment" means any electrical equipment, including but not limited to transformers (including those used in railway locomotives and self-propelled cars), capacitors, circuit breakers, reclosers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, and cable, that contain 50 ppm or greater PCB, but less than 500 ppm PCB. Oil-filled electrical equipment other than circuit breakers, reclosers, and cable whose PCB concentration is unknown must be assumed to be PCB-Contaminated Electrical Equipment. (See §761.30(a) and (h) for provisions permitting reclassification of electrical equipment containing 500 ppm or greater PCBs to PCB-Contaminated Electrical Equipment).

"PCB Equipment" means any manufactured item, other than a PCB Container or a PCB Article Container, which contains a PCB Article or other PCB Equipment, and includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

"PCB Item" is defined as any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has a part of it any PCB or PCBs.

"PCB Transformer" means any transformer that contains 500 ppm PCB or greater.

"PCB waste(s)" means those PCBs and PCB Items that are subject to the disposal requirements of subpart D of this part.

"Person" means any natural or judicial person including any individual, corporation, partnership, or association; any State or political subdivision thereof; any interstate body; and any department, agency, or instrumentality of the Federal Government.

"Posing an exposure risk to food or feed" means being in any location where human food or animal feed products could be exposed to PCBs released from a PCB Item. A PCB Item poses an exposure risk to food or feed if PCBs released in any way from the PCB Item have a potential pathway to human food or animal feed. EPA considers human food or animal feed include items regulated by the U.S Department of Agriculture or th Food and Drug Administration human food or animal feed; this cludes direct additives. Food or feed excluded from this definition if it used or stored in private homes.

"Process" means the preparation a chemical substance or mixture, afte its manufacture, for distribution commerce:

(1) In the same form or physica state as, or in a different form physical state from, that in which was received by the person so prepa ing such substance or mixture, or

(2) As part of an article containin the chemical substance or mixture.

"Qualified incinerator" means one the following:

(1) An incinerator approved unde the provisions of § 761.70. Any level PCB concentration can be destroye in an incinerator approved unde § 761.70.

(2) A high efficiency boiler whic complies with the criteria § 761.60(a)(2)(iii)(A), and for whic the operator has given written notic to the appropriate EPA Regional Ad ministrator in accordance with the tification requirements for the bur ing of mineral oil dielectric fluid unde § 761.60(a)(2)(iii)(B).

(3) An incinerator approved unde section 3005(c) of the Resource Co servation and Recovery Act (42 U.S.C 6925(c)) (RCRA).

(4) Industrial furnaces and boile which are identified in 40 CFR 260 and 40 CFR 266.41(b) when operati at their normal operating tempe tures (this prohibits feeding flui above the level of detection, duri either startup or shutdown ope ations).

"Quantifiable Level/Level of Dete tion" means 2 micrograms per gr from any resolvable gas chromatog phic peak, i.e. 2 ppm.

"Recycled PCBs" means those PC which appear in the processing paper products or asphalt roofing terials from PCB-contaminated materials. Processes which recy PCBs must meet the following requi ments:

1) There are no detectable concentions of PCBs in asphalt roofing terial products leaving the processg site.

2) The concentration of PCBs in per products leaving any manufacing site processing paper products, in paper products imported into the ited States, must have an annual erage of less than 25 ppm with a 50 m maximum.

3) The release of PCBs at the point which emissions are vented to ambit air must be less than 10 ppm.

4) The amount of Aroclor PCBs led to water discharged from an asalt roofing processing site must at times be less than 3 micrograms per r (μg/L) for total Aroclors (roughly arts per billion (3 ppb)). Water disarges from the processing of paper oducts must at all times be less than micrograms per liter (μg/1) for total oclors (roughly 3 ppb), or comply h the equivalent mass-based limitan.

5) Disposal of any other process stes at concentrations of 50 ppm or ater must be in accordance with part D of this part.

Retrofill" means to remove PCB or B-contaminated dielectric fluid and replace it with either PCB, PCBtaminated, or non-PCB dielectric id.

Rupture of a PCB Transformer" ans a violent or non-violent break the integrity of a PCB Transformer used by an overtemperature and/or erpressure condition that results in release of PCBs.

Sale for purposes other than ale" means sale of PCBs for pures of disposal and for purposes of , except where use involves sale for tribution in commerce. PCB Equipnt which is first leased for purposes use any time before July 1, 1979, l be considered sold for purposes er than resale.

Small quantities for research and elopment" means any quantity of Bs (1) that is originally packaged in e or more hermetically sealed conners of a volume of no more than e (5.0) milliliters, and (2) that is d only for purposes of scientific eximentation or analysis, or chemical earch on, or analysis of, PCBs, but not for research or analysis for the development of a PCB product.

"Storage for disposal" means temporary storage of PCBs that have been designated for disposal.

"Transfer facility" means any transportation-related facility including loading docks, parking areas, and other similar areas where shipments of PCB waste are held during the normal course of transportation. Transport vehicles are not transfer facilities under this definition, unless they are used for the storage of PCB waste, rather than for actual transport activities. Storage areas for PCB waste at transfer facilities are subject to the storage facility standards of § 761.65, but such storage areas are exempt from the approval requirements of § 761.65(d) and the recordkeeping requirements of § 761.180, unless the same PCB waste is stored there for a period of more than 10 consecutive days between destinations.

"Transporter of PCB waste" means, for the purposes of subpart K of this part, any person engaged in the transportation of regulated PCB waste by air, rail, highway, or water for purposes other than consolidation by a generator.

"Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

"Totally enclosed manner" means any manner that will ensure no exposure of human beings or the environment to any concentration of PCBs.

"Waste Oil" means used products primarily derived from petroleum, which include, but are not limited to, fuel oils, motor oils, gear oils, cutting oils transmission fluids, hydraulic fluids, and dielectric fluids.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[49 FR 25239, June 20, 1984, as amended at 49 FR 28189, July 10, 1984; 49 FR 29066, July 18, 1984; 49 FR 44638, Nov. 8, 1984; 50 FR 29199, July 17, 1985; 50 FR 32176, Aug. 9, 1985; 53 FR 24220, June 27, 1988; 53 FR 27327, July 19, 1988; 54 FR 52745, Dec. 21, 1989; 55 FR 26205, June 27, 1990]

§ 761.19 References.

(a) [Reserved]

(b) *Incorporations by reference.* The following material is incorporated by reference, and is available for inspection at the Office of the Federal Register Information Center, Rm. 8301, 1100 L St. NW., Washington, DC 20408. These incorporations by reference were approved by the Director of the Office of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER. Copies of the incorporated material may be obtained from the TSCA Public Docket Office (TS-793), Rm. NE-G004, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, or from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

References	CFR Citation
ASTM D-93-85 Standard Test Method for Flash Point by Pensky-Martens Closed Tester.	§ 761.60(a)(3)(iii)(B)(*6*); § 761.75(b)(8)(iii).
ASTM D-129-64 (Reapproved 1978) Standard Test Method for Sulfur in Petroleum Products (General Bomb Method).	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-240-87 (Reapproved 1980) Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuel by Bomb Calorimeter.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-482-80 Standard Test Method for Ash from Petroleum Products.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-524-81 Standard Test Method for Ramsbottom Carbon Residue of Petroleum Products.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-808-81 Standard Test Method for Chlorine in New and Used Petroleum Products (Bomb Method).	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-923-86 Standard Test Method for Sampling Electrical Insulating Liquids.	§ 761.60(g)(1)(ii); § 761.60(g)(2)(ii).
ASTM D-1266-80 (Reapproved 1981) Standard Test Method for Sulfur in Petroleum Products (Lamp Method).	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-1796-83 (Reapproved 1977) Methods for Water and Sediment in Crude Oils and Fuel Oils by Centrifuge.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-2158-85 Standard Test Method for Residues in Liquefied Petroleum (LP) Gas.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-2709-68 (Reapproved 1982) Standard Test Method for Water and Sediment in Distillate Fuel by Centrifuge.	§ 761.60(a)(3)(iii)(B)(*6*).
ASTM D-2784-80 Standard Test Method for Sulfur in Liquefied Petroleum Gases (Oxyhydrogen Burner or Lamp).	§ 761.60(a)(3
ASTM D-3178-84 (Reapproved 1979) Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coke and Coal.	§ 761.60(a)(3
ASTM D-3278-78 (Reapproved 1982) Standard Test Methods for Flash Point of Liquid by Setaflash Closed Tester.	§ 761.75(b)(8
ASTM E-258-67 (Reapproved 1987) Standard Test Method for Total Nitrogen Inorganic Material by Modified KJELDAHL Method.	§ 761.60(a)(3

[47 FR 22098, May 21, 1982, as amen
49 FR 29067, July 18, 1984; 49 FR
Sept. 19, 1984; 53 FR 10391, Mar. 31,
53 FR 12524, Apr. 15, 1988; 53 FR
June 9, 1988]

Subpart B—Manufacturing, Pro ing, Distribution in Comm and Use of PCBs and PCB

§ 761.20 Prohibitions.

Except as authorized in § 761.3
activities listed in paragraphs (a
(d) of this section are prohibite
suant to section 6(e)(2) of TSCA
requirements set forth in parag
(b) and (c) of this section conce
export and import of PCBs for
poses of disposal and PCB Item
purposes of disposal are estab
pursuant to section 6(e)(1) of T
Subject to any exemptions gr
pursuant to section 6(e)(3)(B
TSCA, the activities listed in
graphs (b) and (c) of this sectio
prohibited pursuant to s
(6)(e)(3)(A) of TSCA. In additio
Administrator hereby finds, und
authority of section 12(a)(2) of T
that the manufacture, processin
distribution in commerce of PC
concentrations of 50 ppm or g
and PCB Items with PCB conc
tions of 50 ppm or greater prese
unreasonable risk of injury to
within the United States. This fi
is based upon the well-docum
human health and environ
hazard of PCB exposure, the
probability of human and enviro
tal exposure to PCBs and PCB
from manufacturing, processin

distribution activities; the potential hazard of PCB exposure posed by the transportation of PCBs or PCB Items within the United States; and the evidence that contamination of the environment by PCBs is spread far beyond the areas where they are used. In addition, the Administrator hereby finds, for purposes of section 6(e)(2)(C) of TSCA, that any exposure of human beings or the environment to PCBs, as measured or detected by any scientifically acceptable analytical method, may be significant, depending on such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of exposure. For purposes of determining which PCB Items are totally enclosed, pursuant to section 6(e)(2)(C) of TSCA, since exposure to such Items may be significant, the Administrator further finds that a totally enclosed manner is a manner which results in no exposure to humans or the environment to PCBs. The following activities are considered totally enclosed: distribution in commerce of intact, nonleaking electrical equipment such as transformers (including transformers used in railway locomotives and self-propelled cars), capacitors, electromagnets, voltage regulators, switches (including sectionalizers and motor starters), circuit breakers, reclosers, and cable that contain PCBs at any concentration and processing and distribution in commerce of PCB Equipment containing an intact, nonleaking PCB Capacitor. See paragraph (c)(1) of this section for provisions allowing the distribution in commerce of PCBs and PCB Items.

(a) No persons may use any PCB, or any PCB Item regardless of concentration, in any manner other than in a totally enclosed manner within the United States unless authorized under § 761.30, except that:

(1) An authorization is not required to use those PCBs or PCB Items which consist of excluded PCB products as defined in § 761.3.

(2) An authorization is not required to use those PCBs or PCB Items resulting from an excluded manufacturing process or recycled PCBs as defined in § 761.3, provided all applicable conditions of § 761.1(f) are met.

(3) An authorization is not required to use those PCB Items which contain or whose surfaces have been in contact with excluded PCB products as defined in § 761.3.

(4) An authorization is not required to apply sewage sludges, contaminated with PCBs below 50 ppm, to land when regulated by authorities under the Clean Water Act and the Resource Conservation and Recovery Act.

(b) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption except that:

(1) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption, except that an exemption is not required for PCBs manufactured in an excluded manufacturing process as defined in § 761.3, provided that all applicable conditions of § 761.1(f) are met.

(2) PCBs at concentrations less than 50 ppm may be imported or exported for purposes of disposal.

(c) No persons may process or distribute in commerce any PCB, or any PCB Item regardless of concentration, for use within the United States or for export from the United States without an exemption, except that an exemption is not required to process or distribute in commerce PCBs or PCB Items resulting from an excluded manufacturing process as defined in § 761.3, or to process or distribute in commerce recycled PCBs as defined in § 761.3, or to process or distribute in commerce excluded PCB products as defined in § 761.3, provided that all applicable conditions of § 761.1(f) are met. In addition, the activities described in paragraphs (c) (1) through (5) of this section may also be conducted without an exemption, under the conditions specified therein.

(1) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater, sold before July 1, 1979 for purposes other than resale may be distributed in commerce only in a totally enclosed manner after that date.

(2) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater may be processed and distributed in commerce in compliance with the requirements of this Part for purposes of disposal in accordance with the requirements of § 761.60.

(3) PCBs or PCB Items may be exported for disposal until May 1, 1980, if an export notice is submitted at least thirty (30) days before the first shipment in any calendar year leaves the customs territory of the United States. Export notices must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The generator of the PCB waste material intended for disposal, or an agent acting on his behalf, must certify to the best of his knowledge and belief that the information is complete and accurate. Each notice should contain the following information:

(i) Name, company name, address, and telephone number of the owner of the PCB waste material to be exported and the name and address of any person or agent acting on his behalf;

(ii) Estimated quantity of wastes to be shipped during the calendar year and the estimated number of shipments to be made and the dates when such shipments are expected to leave the customs territory of the United States;

(iii) Description of the PCBs or PCB Items being exported;

(iv) Country(s) of destination for the shipments;

(v) Name and address of facility(s) receiving the shipment and person(s) responsible for receiving the shipment(s).

(vi) Method(s) of disposal and precautions taken to control release into the environment.

(vii) No less than 30 days after the end of each calendar quarter (March 31, June 30, September 30, and December 31) during which PCBs were exported for disposal, each person exporting the PCBs must submit a report to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M
SW., Washington, DC 20460.
report shall list the quantity of
wastes in each shipment made du
the quarter and include the date
each shipment left the customs
tory of the United States and th
formation specified in paragr
(c)(3)(i) and (iii) through (vi) of
section. If the quantity of w
shipped during the calendar yea
ceeds by 25 percent or more the
mated quantities reported in
graph (c)(3)(ii) of this section, a
cial export notice must be submi
to the TSCA Document Proce
Center (TS-790) at the address
in paragraph (c)(3) of this sectio
least 30 days before any additi
shipments leave the customs terri
of the United States and the n
shall include the information spec
in paragraphs (c)(3)(i) through (v
this section.

(viii) Any person expecting to ex
PCB wastes for disposal in cale
year 1980 must submit an ex
notice at least thirty (30) days be
the first shipment leaves the cus
territory of the United States to
TSCA Document Processing Ce
(TS-790) at the address given in
graph (c)(3) of this section, and
notice shall contain the informa
listed in paragraphs (c)(3)(i) thro
(vi) of this section.

(4) PCBs, at concentrations of
than 50 ppm, or PCB Items, with
centrations of less than 50 ppm,
be processed and distributed in
merce for purposes of disposal.

(5) Equipment, structures, or
materials that were contamin
with PCBs because of spills from
proximity to, a PCB Item >50
and which are not otherwise au
ized for use or distribution in
merce under this part, may be dis
uted in commerce, provided that
materials were decontaminated in
cordance with applicable EPA
spill cleanup policies in effect at
time of the decontamination or, if
previously decontaminated, at
time of the distribution in commer

(d) The use of waste oil that
tains any detectable concentratio
PCB as a sealant, coating, or dust
trol agent is prohibited. Prohib

uses include, but are not limited to, road oiling, general dust control, use as a pesticide or herbicide carrier, and use as a rust preventative on pipes.

(e) In addition to any applicable requirements under 40 CFR Part 266, subpart E, marketers and burners of used oil who market (process or distribute in commerce) for energy recovery, used oil containing any quantifiable level of PCBs are subject to the following requirements:

(1) *Restrictions on marketing.* Used oil containing any quantifiable level of PCBs (2 ppm) may be marketed only to:

(i) Qualified incinerators as defined in 40 CFR 761.3.

(ii) Other marketers identified in 40 CFR 266.41(a)(1).

(iii) Burners identified in 40 CFR 266.41(b). Only burners in the automotive industry may burn used oil generated from automotive sources in used oil-fired space heaters provided the provisions of 40 CFR 266.41(b)(2)(iii) (A), (B) and (C) are met. The Regional Administrator may grant a variance for a boiler that does not meet the 40 CFR 266.41(b) criteria after considering the criteria listed in 40 CFR 260.32 (a) through (f). The applicant must address the relevant criteria contained in 40 CFR 260.32 (a) through (f) in an application to the Regional Administrator.

(2) *Testing of used oil fuel.* Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

(i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.

(ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in § 761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.

(iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

(3) *Restrictions on burning.* (i) Used oil containing any quantifiable levels of PCB may be burned for energy recovery only in the combustion facilities identified in paragraph (e)(1) of this section when such facilities are operating at normal operating temperatures (this prohibits feeding these fuels during either startup or shutdown operations). Owners and operators of such facilities are "burners" of used oil fuels.

(ii) Before a burner accepts from a marketer the first shipment of used oil fuel containing detectable PCBs (2 ppm), the burner must provide the marketer a one-time written and signed notice certifying that:

(A) The burner has complied with any notification requirements applicable to "qualified incinerators" (§ 761.3) or to "burners" regulated under 40 CFR Part 266, subpart E.

(B) The burner will burn the used oil only in a combustion facility identified in paragraph (e)(1) of this section and identify the class of burner he qualifies.

(4) *Recordkeeping requirements.* The following recordkeeping requirements are in addition to the recordkeeping requirements for marketers found in 40 CFR 266.43(b)(6) (i) and (ii), and for burners found in 40 CFR 266.44(e).

(i) *Marketers.* Marketers who first claim that the used oil fuel contains no detectable PCBs must include among the records required by 40 CFR 266.43(b)(6)(i), copies of the analysis or other information documenting his claim, and he must include among the records required by 40 CFR 266.43(b)(6)(ii), a copy of each certification notice received or prepared relating to transactions involving PCB-containing used oil.

(ii) *Burners.* Burners must include among the records required by 40 CFR 266.44(e), a copy of each certification notice required by paragraph (e)(3)(iii) of this section that he sends to a marketer.

(Approved by the office of Management of Budget under OMB control number 2050-0047)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 49 FR 25241, June 20, 1984; 49 FR 28190, July 10, 1984; 49 FR 44638, Nov. 8, 1984; 53 FR 12524, Apr. 15, 1988; 53 FR 24220, June 27, 1988]

§ 761.30 Authorizations.

The following non-totally enclosed PCB activities are authorized pursuant to section 6(e)(2)(B) of TSCA:

(a) *Use in and servicing of transformers (other than railroad transformers).* PCBs at any concentration may be used in transformers (other than in railroad locomotives and self-propelled railroad cars) and may be used for purposes of servicing including rebuilding these transformers for the remainder of their useful lives, subject to the following conditions:

(1) *Use conditions.* (i) As of October 1, 1985, the use and storage for reuse of PCB Transformers that pose an exposure risk to food or feed is prohibited.

(ii) As of October 1, 1990, the use of network PCB Transformers with higher secondary voltages (secondary voltages equal to or greater than 480 volts, including 480/277 volt systems) in or near commercial buildings is prohibited. Network PCB Transformers with higher secondary voltages which are removed from service in accordance with this requirement must either be reclassified to PCB Contaminated or non PCB status, placed into storage for disposal, or disposed.

(iii) Except as otherwise provided, as of October 1, 1985, the installation of PCB Transformers, which have been placed into storage for reuse or which have been removed from another location, in or near commercial buildings is prohibited.

(A) The installation of PCB Transformers on or after October 1, 1985, however, and their use thereafter, is permitted either in an emergency situation, as defined in § 761.3, or in situations where the transformer has been retrofilled and is being placed into service in order to qualify for reclassification under paragraph (a)(2)(v) of this section.

(B) Installation of a PCB Transformer in an emergency situation is permitted when done in accordance with the following:

(*1*) Documentation to support the reason for the emergency installation of a PCB Transformer must be maintained at the owner's facility and completed within 30 days after installation of the PCB Transformer. The documentation must include, but is not limited to:

(*i*) The type of transformer, i.e. radial or lower or higher network, that requires replacement.

(*ii*) The type(s) of transformers, i.e. radial or lower or higher network, that must be used for replacement.

(*iii*) The date of transformer failure.

(*iv*) The date of subsequent replacement.

(*v*) The type of transformer, i.e. radial or lower or higher network, installed as a replacement.

(*vi*) A statement describing actions taken to locate a non-PCB or PCB-Contaminated transformer replacement.

(*2*) Such emergency installation is permitted until October 1, 1990, and the use of any PCB Transformer installed on such an emergency basis is permitted for 1 year from the date of installation or until October 1, 1990, whichever is earlier.

(*3*) PCB Transformers installed for emergency purposes may be subsequently reclassified; however, the transformer must be effectively reclassified to a non-PCB or PCB-Contaminated status within 1 year after installation or by October 1, 1990, whichever is earlier because the transformer was initially installed in an emergency situation.

(C) Installation of a retrofilled PCB Transformer for reclassification purposes is permitted when it is done in accordance with the following:

(*1*) Those who installed transformers for reclassification purposes must maintain on the owner's premises, completed within 30 days of installaion, the following information:

(*i*) The date of installation.

(*ii*) The type of transformer, i.e., adial or lower or higher network, intalled.

(*iii*) The PCB concentration, if nown, at the time of installation.

(*iv*) The retrofill and reclassification chedule.

(*2*) For purposes of this paragraph, he installation of retrofilled PCB Transformers for purposes of reclassiication under paragraph (a)(2)(v) of his section is permitted until October , 1990.

(*i*) However, the use of a retrofilled PCB Transformer installed for reclasification purposes is limited to 18 months after installation or until Ocober 1, 1990, whichever is earlier.

(*ii*) Retrofilled mineral oil PCB Transformers may be installed for relassification purposes indefinitely fter October 1, 1990.

(*iii*) Once a retrofilled transformer as been installed for reclassification urposes, it must be tested 3 months fter installation to ascertain the conentration of PCBs. If the PCB conentration is below 50 ppm, the transormer can be reclassified as a non-PCB Transformer. If the PCB concenration is between 50 and 500 ppm, the ransformer can be reclassified as a PCB-Contaminated transformer. If he PCB concentration remains at 500 pm or greater, the entire process must either be repeated until the ransformer has been reclassified to a on-PCB or PCB-Contaminated transormer in accordance with paragraph a)(2)(v) of this section or the transormer must be removed from service.

(D) Owners who installed PCB Transformers in emergency situations r for reclassification purposes between October 1, 1985 and September , 1988 must notify the Regional Administrator in writing by October 3, 988 of such installation. The notificaion for emergency installation must nclude the information in paragraph a)(1)(iii)(B)(*1*)(*i*) through (*vi*) of this ection. The notification for reclassifiation must include the information in aragraph (a)(1)(iii)(C)(*1*)(*i*) through *iv*) of this section. All PCB Transformers installed in an emergency situation or installed for reclassification purposes are subject to the requirements of this Part 761.

(iv) As of October 1, 1990, all radial PCB Transformers, in use in or near commercial buildings, and lower secondary voltage network PCB Transformers not located in sidewalk vaults in or near commercial buildings (network transformers with secondary voltages below 480 volts) that have not been removed from service as provided in paragraph (a)(1)(iv)(B) of this section, must be equipped with electrical protection to avoid transformer ruptures caused by high current faults.

(A) Current-limiting fuses or other equivalent technology must be used to detect sustained high current faults and provide for complete deenergization of the transformer (within several hundredths of a second in the case of radial PCB Transformers and within tenths of a second in the case of lower secondary voltage network PCB Transformers), before transformer rupture occurs. The installation, setting, and maintenance of current-limiting fuses or other equivalent technology to avoid PCB Transformer ruptures from sustained high current faults must be completed in accordance with good engineering practices.

(B) All lower secondary voltage network PCB Transformers not located in sidewalk vaults (network transformers with secondary voltages below 480 volts), in use in or near commercial buildings, which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section by October 1, 1990, must be removed from service by October 1, 1993.

(C) As of October 1, 1990, owners of lower secondary voltage network PCB Transformers, in use in or near commercial buildings which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section and which are not located in sidewalk vaults, must register in writing those transformers with the EPA Regional Administrator in the appropriate region. The information required to be provided in writing to the Regional Administrator includes:

(*1*) The specific location of the PCB Transformer(s).

(*2*) The address(es) of the building(s) and the physical location of the PCB Transformer(s) on the building site(s).

(*3*) The identification number(s) of the PCB Transformer(s).

(D) As of October 1, 1993, all lower secondary voltage network PCB Transformers located in sidewalk vaults (network transformers with secondary voltages below 480 volts) in use near commercial buildings must be removed from service.

(v) As of October 1, 1990, all radial PCB Transformers with higher secondary voltages (480 volts and above, including 480/277 volt systems) in use in or near commercial buildings must, in addition to the requirements of paragraph (a)(1)(iv)(A) of this section, be equipped with protection to avoid transformer ruptures caused by sustained low current faults.

(vi) As of December 1, 1985, all PCB Transformers (including PCB Transformers in storage for reuse) must be registered with fire response personnel with primary jurisdiction (that is, the fire department or fire brigade which would normally be called upon for the initial response to a fire involving the equipment). Information required to be provided to fire response personnel includes:

(A) The location of the PCB Transformer(s) (the address(es) of the building(s) and the physical location of the PCB Transformer(s) on the building site(s) and for outdoor PCB Transformers, the location of the outdoor substation).

(B) The principal constituent of the dielectric fluid in the transformer(s) (e.g., PCBs, mineral oil, or silicone oil).

(C) The name and telephone number of the person to contact in the event of a fire involving the equipment.

(vii) As of December 1, 1985, PCB Transformers in use in or near commercial buildings must be registered with building owners. For PCB Transformers located in commercial buildings, PCB Transformer owners must register the transformers with the building owner of record. For PCB Transformers located near commercial buildings, PCB Transformer owners must register the transformers with all owners of buildings located within 30 meters of the PCB Transform Information required to be provid building owners by PCB Transf owners includes but is not limited

(A) The specific location of the Transformer(s).

(B) The principal constituent dielectric fluid in the transform (e.g., PCBs, mineral oil, or silicon

(C) The type of transformer ins tion (e.g., 208/120 volt network, 120 volt radial, 208 volt radial, 48 network, 480/277 volt network volt radial, 480/277 volt radial).

(viii) As of December 1, 1985, bustible materials, including, bu limited to paints, solvents, pla paper, and sawn wood must n stored within a PCB Transforme closure (i.e., in a transformer va in a partitioned area housing a former); within 5 meters of a former enclosure, or, if unenc (unpartitioned), within 5 meters PCB Transformer.

(ix) A visual inspection of each Transformer (as defined in the d tion of "PCB Transformer" § 761.3) in use or stored for reuse be performed at least once eve months. These inspections may place any time during the 3-mont riods: January-March, April- July-September, and October-De ber as long as there is a minimu 30 days between inspections. visual inspection must include in gation for any leak of dielectric on or around the transformer. extent of the visual inspections depend on the physical constrain each transformer installation should not require an electrical down of the transformer being spected.

(x) If a PCB Transformer is fou have a leak which results in any tity of PCBs running off or abo run off the external surface of transformer, then the transfo must be repaired or replaced to nate the source of the leak. I cases any leaking material mus cleaned up and properly dispose according to disposal requiremen § 761.60. Cleanup of the released must be initiated as soon as pos but in no case later than 48 hou its discovery. Until appropriate a is completed, any active leak of PCBs must be contained to prevent exposure of humans or the environment and inspected daily to verify containment of the leak. Trenches, dikes, buckets, and pans are examples of proper containment measures.

(xi) If a PCB Transformer is involved in a fire-related incident, the owner of the transformer must immediately report the incident to thé National Response Center (toll-free 1-800-424-8802; in Washington, DÇ 202-426-2675). A fire-related incident is defined as any incident involving a PCB Transformer which involves the generation of sufficient heat and/or pressure (by any source) to result in the violent or non-violent rupture of a PCB Transformer and the release of PCBs. Information must be provided regarding the type of PCB Transformer installation involved in the fire-related incident (e.g., high or low secondary voltage network transformer, high or low secondary voltage simple radial system, expanded radial system, primary selective system, primary loop system, or secondary selective system or other systems) and the readily ascertainable cause of the fire-related incident (e.g., high current fault in the primary or secondary or low current fault in secondary). The owner of the PCB Transformer must also take measures as soon as practically and safely possible to contain and control any potential releases of PCBs and incomplete combustion products into water. These measures include, but are not limited to:

(A) The blocking of all floor drains in the vicinity of the transformer.

(B) The containment of water runoff.

(C) The control and treatment (prior to release) of any water used in subsequent cleanup operations.

(xii) Records of inspection and maintenance history shall be maintained at least 3 years after disposing of the transformer and shall be made available for inspection, upon request by EPA. Such records shall contain the following information for each PCB Transformer:

(A) Its location.

(B) The date of each visual inspection and the date that leak was discovered, if different from the inspection date.

(C) The person performing the inspection.

(D) The location of any leak(s).

(E) An estimate of the amount of dielectric fluid released from any leak.

(F) The date of any cleanup, containment, repair, or replacement.

(G) A description of any cleanup, containment, or repair performed.

(H) The results of any containment and daily inspection required for uncorrected active leaks.

(xiii) A reduced visual inspection frequency of at least once every 12 months applies to PCB Transformers that utilize either of the following risk reduction measures. These inspections may take place any time during the calendar year as long as there is a minimum of 180 days between inspections.

(A) A PCB Transformer which has impervious, undrained, secondary containment capacity of at least 100 percent of the total dielectric fluid volume of all transformers so contained or

(B) A PCB Transformer which has been tested and found to contain less than 60,000 ppm PCBs (after 3 months of in service use if the transformer has been serviced for purposes of reducing the PCB concentration).

(xiv) An increased visual inspection frequency of at least once every week applies to any PCB Transformer in use or stored for reuse which poses an exposure risk to food or feed. The user of a PCB Transformer posing an exposure risk to food is responsible for the inspection, recordkeeping, and maintenance requirements under this section until the user notifies the owner that the transformer may pose an exposure risk to food or feed. Following such notification, it is the owner's ultimate responsibility to determine whether the PCB Transformer poses an exposure risk to food or feed.

(xv) In the event a mineral oil transformer, assumed to contain less than 500 ppm of PCBs as provided in § 761.3, is tested and found to be contaminated at 500 ppm or greater PCBs, it will be subject to all the requirements of this Part 761. In addition, efforts must be initiated immediately to bring the transformer into compliance in accordance with the following schedule:

(A) Report fire-related incidents, effective immediately after discovery.

(B) Mark the PCB transformer within 7 days after discovery.

(C) Mark the vault door, machinery room door, fence, hallway or other means of access to the PCB Transformer within 7 days after discovery.

(D) Register the PCB Transformer in writing with fire response personnel with primary jurisdiction and with the building owner, within 30 days of discovery.

(E) Install electrical protective equipment on a radial PCB Transformer and a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building within 18 months of discovery or by October 1, 1990, whichever is later.

(F) Remove a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building, if electrical protective equipment is not installed, within 18 months of discovery or by October 1, 1993, whichever is later.

(G) Remove a lower secondary voltage network PCB Transformer located in a sidewalk vault in or near a commercial building, within 18 months of discovery or by October 1, 1993, whichever is later.

(H) Retrofill and reclassify a radial PCB Transformer or a lower or higher secondary voltage network PCB Transformer, located in other than a sidewalk vault in or near a commercial building, within 18 months or by October 1, 1990, whichever is later. This is an option in lieu of installing electrical protective equipment on a radial or lower secondary voltage network PCB Transformer located in other than a sidewalk vault or of removing a higher secondary voltage network PCB Transformer or a lower secondary voltage network PCB Transformer, located in a sidewalk vault, from service.

(I) Retrofill and reclassify a lower secondary voltage network PCB Transformer, located in a sidewalk vault, in or near a commercial building within 18 months or by October 1, 1993, whichever is later. This is an option in lieu of installing electrical protective equipment or removing t
transformer from service.

(J) Retrofill and reclassify a high
secondary voltage network PC
Transformer, located in a sidew
vault, in or near a commercial buildi
within 18 months or by October
1990, whichever is later. This is
option in lieu of other requirements

(2) *Servicing conditions.* (i) Tra
formers classified as PCB-Contamin
ed Electrical Equipment (as defined
the definition of "PCB-Contaminat
Electrical Equipment" under § 761
may be serviced (including rebuildin
only with dielectric fluid containi
less than 500 ppm PCB.

(ii) Any servicing (including rebui
ing) of PCB Transformers (as defin
in the definition of "PCB Transfor
er" under § 761.3) that requires the
moval of the transformer coil from t
transformer casing is prohibited. P
Transformers may be serviced (inclu
ing topping off) with dielectric fluid
any PCB concentration.

(iii) PCBs removed during any ser
icing activity must be captured a
either reused as dielectric fluid or d
posed of in accordance with the r
quirements of § 761.60. PCBs fr
PCB Transformers must not be mix
with or added to dielectric fluid fr
PCB-Contaminated Electrical Equi
ment.

(iv) Regardless of its PCB concentr
tion, dielectric fluids containing l
than 500 ppm PCB that are mix
with fluids that contain 500 ppm
greater PCB must not be used as
electric fluid in any electrical equ
ment. The entire mixture of dielect
fluid must be considered to be great
than 500 ppm PCB and must be d
posed of in an incinerator that me
the requirements in § 761.70.

(v) A PCB Transformer may be co
verted to PCB-Contaminated Elect
cal Equipment or to a non-PCB Tra
former and a transformer that is cl
sified as PCB-Contaminated Electri
Equipment may be reclassified to
non-PCB Transformer by draining,
filling and/or otherwise servicing t
transformer. In order to reclassify, t
transformer's dielectric fluid m
contain less than 500 ppm PCB (f
conversion to PCB-Contaminated E
trical Equipment) or less than 50 p

CB (for conversion to a non-PCB
ansformer) after a minimum of
ree months of in-service use subse-
ent to the last servicing conducted
r the purpose of reducing the PCB
ncentration in the transformer. In-
rvice means that the transformer is
ed electrically under loaded condi-
ns that raise the temperature of the
electric fluid to at least 50° Centi-
ade. The Director, Exposure Evalua-
n Division may grant, without fur-
er rulemaking, approval for the use
alternative methods that simulate
e loaded conditions of in-service use.
PCBs removed from transformers
r purposes of reducing PCB concen-
ations are subject to the disposal re-
irements of § 761.60.

vi) Any dielectric fluid containing
ppm or greater PCB used for servic-
transformers must be stored in ac-
rdance with the storage for disposal
quirements of § 761.65.

vii) Processing and distribution in
mmerce of PCBs for purposes of
vicing transformers is permitted
ly for persons who are granted an
emption under TSCA 6(e)(3)(B).

b) *Use in and servicing of railroad
nsformers.* PCBs may be used in
nsformers in railroad locomotives
railroad self-propelled cars ("rail-
d transformers") and may be proc-
ed and distributed in commerce for
rposes of servicing these transform-
in a manner other than a totally
closed manner subject to the follow-
conditions:

1) *Use restrictions.* (i) After July 1,
3, the number of railroad trans-
mers containing a PCB concentra-
n greater than 60,000 ppm (6.0 per-
t on a dry weight basis) in use by
affected railroad organization
y not exceed two-thirds of the total
lroad transformers containing PCBs
use by that organization on January
982.

ii) After January 1, 1984, the
mber of railroad transformers con-
ning a PCB concentration greater
n 60,000 ppm in use by any affect-
railroad organization may not
eed one-third of the total railroad
nsformers containing PCBs in use
that organization on January 1,
2.

(iii) After July 1, 1984, use of railroad transformers that contain dielectric fluids with a PCB concentration greater than 60,000 ppm is prohibited.

(iv) After July 1, 1985, the number of railroad transformers containing a PCB concentration greater than 1,000 ppm (0.1 percent on a dry weight basis) in use by any affected railroad organization may not exceed two-thirds of the total railroad transformers containing PCBs in use by that organization on July 1, 1984.

(v) After January 1, 1986, the number of railroad transformers containing a PCB concentration greater than 1,000 ppm in use by any affected railroad organization may not exceed one-third of the total railroad transformers containing PCBs in use by that organization on July 1, 1984.

(vi) After July 1, 1986, use of railroad transformers that contain dielectric fluids with a PCB concentration greater than 1,000 ppm is prohibited.

(vii) The concentration of PCBs in the dielectric fluid contained in railroad transformers must be measured:

(A) Immediately upon completion of any authorized servicing of a railroad transformer conducted for the purpose of reducing the PCB concentration in the dielectric fluid in the transformer, and

(B) Between 12 and 24 months after each servicing conducted in accordance with paragraph (b)(1)(vii)(A) of this section;

(C) The data obtained as a result of paragraphs (b)(1)(vii)(A) and (B) of this section shall be retained until January 1, 1991.

(2) *Servicing restrictions.* (i) If the coil is removed from the casing of a railroad transformer (e.g., the transformer is rebuilt), after January 1, 1982, the railroad transformer may not be refilled with dielectric fluid containing a PCB concentration greater than 50 ppm;

(ii) After January 1, 1982, railroad transformers may only be serviced with dielectric fluid containing less than 60,000 ppm PCBs, except as provided in paragraph (b)(2)(i) of this section;

(iii) After January 1, 1984, railroad transformers may only be serviced with dielectric fluid containing less than 1000 ppm PCB, except as provided in paragraph (b)(2)(i) of this section;

(iv) Dielectric fluid may be filtered through activated carbon or otherwise industrially processed for the purpose of reducing the PCB concentration in the fluid;

(v) Any PCB dielectric fluid that is used to service PCB railroad transformers must be stored in accordance with the storage for disposal requirements of § 761.65;

(vi) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing railroad transformers is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(vii) A PCB Transformer may be converted to a PCB-Contaminated Transformer or to a non-PCB Transformer by draining, refilling, and/or otherwise servicing the railroad transformer. In order to reclassify, the railroad transformer's dielectric fluid must contain less than 500 ppm (for conversion to PCB-Contaminated Transformer) or less than 50 ppm PCB (for conversion to a non-PCB Transformer) after a minimum of three months of inservice use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the transformer.

(c) *Use in and servicing of mining equipment.* PCBs may be used in mining equipment and may be processed and distributed in commerce for purposes of servicing mining equipment in a manner other than a totally enclosed manner until January 1, 1982, subject to the following conditions:

(1) PCBs may be added to motors in mining equipment in mines or mining areas until January 1, 1982;

(2) PCB motors in loader-type mining equipment must be rebuilt as air-cooled or other non-PCB-containing motors whenever the motor is returned to a service shop for servicing;

(3) PCB motors in continuous miner-type equipment may be rebuilt as PCB motors until January 1, 1980;

(4) Any PCBs that are on hand to service or repair mining equipment must be stored in accordance with the storage for disposal requirements of § 761.65;

(5) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing mining equipment is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(d) *Use in heat transfer systems.* After July 1, 1984, intentionally manufactured PCBs may be used in heat transfer systems in a manner other than a totally enclosed manner at a concentration level of less than 50 ppm provided that the requirements of paragraphs (d)(1) through (5) of this section are met.

(1) Each person who owns a heat transfer system that ever contained PCBs at concentrations above 50 ppm must test for the concentration of PCBs in the heat transfer fluid of such a system no later than November 1, 1979, and at least annually thereafter. All test sampling must be performed at least three months after the most recent fluid refilling. When a test shows that the PCB concentration is less than 50 ppm, testing under this paragraph is no longer required.

(2) Within six months of a test performed under paragraph (d)(1) of this section that indicates that a system's fluid contains 50 ppm or greater PCB (0.005% on a dry weight basis), the system must be drained of the PCBs and refilled with fluid containing less than 50 ppm PCB. Topping-off with heat transfer fluids containing PCB concentrations of less than 50 ppm is permitted.

(3) After November 1, 1979, no heat transfer system that is used in the manufacture or processing of any food, drug, cosmetic or device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act, may contain transfer fluid with 50 ppm or greater PCB (0.005% on a dry weight basis).

(4) Addition of fluids containing PCB concentrations greater than 50 ppm is prohibited.

(5) Data obtained as a result of paragraph (d)(1) of this section must be retained for five years after the heat transfer system reaches 50 ppm PCB.

(e) *Use in hydraulic systems.* After July 1, 1984, intentionally manufac-

tured PCBs may be used in hydraulic
systems in a manner other than a to-
tally enclosed manner at a concentra-
tion level of less than 50 ppm provided
hat the requirements in paragraphs
e)(1) through (5) of this section are
net.

(1) Each person who owns a hydrau-
ic system that ever contained PCBs at
oncentrations above 50 ppm must test
or the concentration of PCBs in the
ydraulic fluid of each system no later
han November 1, 1979, and at least
nnually thereafter. All test sampling
iust be performed at least three
onths after the most recent fluid re-
lling. When a test shows that the
CB concentration is less than 50
pm, testing under this paragraph is
o longer required.

(2) Within six months of a test
nder paragraph (e)(1) of this section
at indicates that a system's fluid
ntains 50 ppm or greater PCB
.005% on a dry weight basis), the
stem must be drained of the PCBs
d refilled with fluid containing less
an 50 ppm PCB. Topping-off with
draulic fluids containing PCB con-
ntrations less than 50 ppm to reduce
CB concentrations is permitted.

3) Addition of PCBs at concentra-
ns of greater than 50 ppm is prohib-
d.

4) Hydraulic fluid may be drained
m a hydraulic system and filtered,
tilled, or otherwise serviced in order
reduce the PCB concentration
low 50 ppm.

5) Data obtained as a result of para-
ph (e)(1) of this section must be re-
ned for five years after the hydrau-
system reaches 50 ppm.

f) *Use in carbonless copy paper.*
rbonless copy paper containing
Bs may be used in a manner other
n a totally enclosed manner indefi-
ely.

g) *Pigments.* Diarylide and Phthalo-
nin pigments that contain 50 ppm
greater PCB may be processed, dis-
uted in commerce, and used in a
nner other than a totally enclosed
nner until January 1, 1982, except
t after July 1, 1979, processing and
ribution in commerce of diarylide
phthalocyanin pigments that con-
50 ppm or greater PCB is permit-
only for persons who are granted
an exemption under TSCA section 6(e)(3)(B).

(h) *Use in and servicing of electromagnets, switches and voltage regulators.* PCBs at any concentration may be used in electromagnets, switches (including sectionalizers and motor starters), and voltage regulators and may be used for purposes of servicing this equipment (including rebuilding) for the remainder of their useful lives, subject to the following conditions:

(1) *Use conditions.* (i) After October 1, 1985, the use and storage for reuse of any electromagnet which poses an exposure risk to food or feed is prohibited if the electromagnet contains greater tha 500 ppm PCBs.

(ii) A visual inspection of each electromagnet subject to paragraph (h)(1)(i) of this section, shall be performed at least once every week according to the conditions contained in § 761.30(a)(1)(iii) and (iv).

(2) *Servicing conditions.* (i) Servicing (including rebuilding) any electromagnet, switch, or voltage regulator with a PCB concentration of 500 ppm or greater which requires the removal and rework of the internal components is prohibited.

(ii) Electromagnets, switches, and voltage regulators classified as PCB-Contaminated Electrical Equipment (as defined in the definition of "PCB-Contaminated Electrical Equipment" under § 761.3) may be serviced (including rebuilding) only with dielectric fluid containing less than 500 ppm PCB.

(iii) PCBs removed during any servicing activity must be captured and either reused as dielectric fluid or disposed of in accordance with the requirements of § 761.60. PCBs from electromagnets switches, and voltage regulators with a PCB concentration of at least 500 ppm must not be mixed with or added to dielectric fluid from PCB-Contaminated Electrical Equipment.

(iv) Regardless of its PCB concentration, dielectric fluids containing less than 500 ppm PCB that are mixed with fluids that contain 500 ppm or greater PCB must not be used as dielectric fluid in any electrical equipment. The entire mixture of dielectric fluid must be considered to be greater than 500 ppm PCB and must be disposed of in an incinerator that meets the requirements of § 761.70.

(v) An electromagnet, switch or voltage regulator with a PCB concentration of at least 500 ppm may be converted to PCB-Contaminated Electrical Equipment or to a non-PCB classification and PCB-Contaminated Electrical Equipment may be reclassified to a non-PCB classification by draining, refilling and/or otherwise servicing the equipment. In order to be reclassified, the equipment's dielectric fluid must contain less than 500 ppm PCB (for conversion to PCB-Contaminated Electrical Equipment) or less than 50 ppm PCB (for conversion to a non-PCB classification) after a minimum of three months of in-service use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the equipment. In-service use means the equipment is used electrically under loaded conditions. The Assistant Administrator may grant, without further rulemaking, approval for the use of alternative methods that simulate the loaded conditions of in-service use. All PCBs removed from this equipment for purposes of reducing PCB concentrations are subject to the disposal requirements of § 761.60.

(vi) Any dielectric fluid containing 50 ppm or greater PCB used for servicing electromagnets, switches, or voltage regulators must be stored in accordance with the storage for disposal requirements of § 761.65.

(vii) Processing and distribution in commerce of PCBs for purposes of servicing electromagnets, switches or voltage regulators is permitted only for persons who are granted an exemption under TSCA 6(e)(3)(B).

(i) *Use in compressors and in the liquid of natural gas pipelines.* PCBs may be used indefinitely in the compressors and in the liquids of natural gas pipelines at a concentration level of less than 50 ppm provided that they are marked in accordance with § 761.45(a).

(j) *Small quantities for research and development.* PCBs may be used in small quantities for research and development, as defined in § 761.3, in a manner other than a totally enclosed manner, indefinitely. Manufacture, processing, and distribution in commerce of PCBs in small quantities for research and development is permitted only for persons who have been granted an exemption under TSCA section 6(e)(3)(B).

(k) *Microscopy mounting medium.* PCBs may be used as a permanent microscopic mounting medium in a manner other than a totally enclosed manner indefinitely. Manufacture, processing, and distribution in commerce of PCBs for purposes of use as a mounting medium are permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(l) *Use in capacitors.* PCBs at any concentration may be used in capacitors, subject to the following conditions:

(1) *Use conditions.* (i) After October 1, 1988, the use and storage for reuse of PCB Large High Voltage Capacitors and PCB Large Low Voltage Capacitors which pose an exposure risk to food or feed is prohibited.

(ii) After October 1, 1988, the use of PCB Large High Voltage Capacitors and PCB Large Low Voltage Capacitors is prohibited unless the capacitor is used within a restricted-access electrical substation or in a contained and restricted-access indoor installation. A restricted-access electrical substation is an outdoor, fenced or walled-in facility that restricts public access and is used in the transmission or distribution of electric power. A contained and restricted-access indoor installation does not have public access and has an adequate roof, walls, and floor to contain any release of PCBs within the indoor location.

(2) [Reserved]

(m) *Use in and servicing of circuit breakers, reclosers and cable.* PCBs at any concentration may be used in circuit breakers, reclosers, and cable and may be used for purposes of servicing this electrical equipment (including rebuilding) for the remainder of their useful lives, subject to the following conditions:

(1) *Servicing conditions.* (i) Circuit breakers, reclosers, and cable may be serviced (including rebuilding) only

with dielectric fluid containing less than 50 ppm PCB.

(ii) Any circuit breaker, recloser or cable found to contain at least 50 ppm PCBs may be serviced only in accordance with the conditions contained in 0 CFR 761.30(h)(2).

(2) [Reserved]

(n) *Microscopy immersion oil.* PCBs nay be used as an immersion oil in luorescence microscopy, in a manner ther than a totally enclosed manner ndefinitely. Manufacture, processing, nd distribution in commerce of PCBs or purposes of use as a low fluoresence immersion oil are permitted nly for persons who are granted an xemption under TSCA section (e)(3)(B).

(o) *Optical liquids.* PCBs may be sed as optical liquids in a manner ther than a totally enclosed manner ndefinitely. Manufacture, processing, nd distribution in commerce of PCBs r purposes of use as optical liquids e permitted only for persons who e granted an exemption under TSCA ction 6(e)(3)(B).

pproved by the Office of Management d Budget under control number 2070-03; the recordkeeping requirements of ragraph (a)(1)(xii) were approved by the ffice of Management and Budget under ntrol number 2070-0007)

ec. 6, Pub. L. 94-469, 90 Stat. 2020, 2025 U.S.C. 2605)

FR 31542, May 31, 1979. Redesignated at FR 19527, May 6, 1982, and amended at FR 37357, Aug. 25, 1983; 48 FR 135, Jan. 1983; 49 FR 25241 and 25242, June 20, 34; 49 FR 28190, and 28202, July 10, 1984; FR 29199, July 17, 1985; 53 FR 12524, r. 15, 1988; 53 FR 24221, June 27, 1988; 53 27328, July 19, 1988; 54 FR 28419, July 989]

bpart C—Marking of PCBs and PCB Items

61.40 Marking requirements.

a) Each of the following items in stence on or after July 1, 1978 shall marked as illustrated in Figure 1 in 61.45(a): The mark illustrated in ure 1 is referred to as M_L throughthis subpart.

1) PCB Containers;

2) PCB Transformers at the time of nufacture, at the time of distribu- in commerce if not already marked, and at the time of removal from use if not already marked. [Marking of PCB-Contaminated Electrical Equipment is not required];

(3) PCB Large High Voltage Capacitors at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal from use if not already marked;

(4) Equipment containing a PCB Transformer or a PCB Large High Voltage Capacitor at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal of the equipment from use if not already marked;

(5) PCB Large Low Voltage Capacitors at the time of removal from use;

(6) Electric motors using PCB coolants (See also paragraph (e) of this section).

(7) Hydraulic systems using PCB hydraulic fluid (See also paragraph (e) of this section);

(8) Heat transfer systems (other than PCB Transformers) using PCBs (See also paragraph (e) of this section);

(9) PCB Article Containers containing articles or equipment that must be marked under paragraphs (a) (1) through (8) of this section;

(10) Each storage area used to store PCBs and PCB Items for disposal.

(b) As of October 1, 1978, each transport vehicle shall be marked on each end and side with M_L as described in § 761.45(a) if it is loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of PCBs in the liquid phase or with one or more PCB Transformers (See also paragraph (e) of this section).

(c) As of January 1, 1979, the following PCB Articles shall be marked with mark M_L as described in § 761.45(a):

(1) All PCB Transformers not marked under paragraph (a) of this section [marking of PCB-Contaminated Electrical Equipment is not required];

(2) All PCB Large High Voltage Capacitors not marked under paragraph (a) of this section

(i) Will be marked individually with mark M_L, or

(ii) If one or more PCB Large High Voltage Capacitors are installed in a protected location such as on a power pole, or structure, or behind a fence; the pole, structure, or fence shall be marked with mark M_L, and a record or procedure identifying the PCB Capacitors shall be maintained by the owner or operator at the protected location.

(d) As of January 1, 1979, all PCB Equipment containing a PCB Small Capacitor shall be marked at the time of manufacture with the statement, "This equipment contains PCB Capacitor(s)". The mark shall be of the same size as the mark M_L.

(e) As of October 1, 1979, applicable PCB Items in paragraphs (a) (1), (6), (7), and (8) of this section containing PCBs in concentrations of 50 to 500 ppm and applicable transport vehicles in paragraph (b) of this section loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of liquid PCBs in concentrations of 50 ppm to 500 ppm shall be marked with mark M_L as described in § 761.45(a).

(f) Where mark M_L is specified but the PCB Article or PCB Equipment is too small to accomodate the smallest permissible size of mark M_L, mark M_S as described in § 761.45(b), may be used instead of mark M_L.

(g) Each large low voltage capacitor, each small capacitor normally used in alternating current circuits, and each fluorescent light ballast manufactured ("manufactured", for purposes of this sentence, means built) between July 1, 1978 and July 1, 1998 that do not contain PCBs shall be marked by the manufacturer at the time of manufacture with the statement, "No PCBs". The mark shall be of similar durability and readability as other marking that indicate electrical information, part numbers, or the manufacturer's name. For purposes of this paragraph marking requirement only is applicable to items built domestically or abroad after June 30, 1978.

(h) All marks required by this subpart must be placed in a position on the exterior of the PCB Items or transport vehicles so that the marks can be easily read by any persons inspecting or servicing the marked PCB Items or transport vehicles.

(i) Any chemical substance or mixture that is manufactured after the effective date of this rule and that contains less than 500 ppm PCB (0.05% on a dry weight basis), including PCB that is a byproduct or impurity, must be marked in accordance with any requirements contained in the exemption granted by EPA to permit such manufacture and is not subject to any other requirement in this subpart unless so specified in the exemption. This paragraph applies only to containers of chemical substances or mixtures. PCB articles and equipment into which the chemical substances or mixtures are processed, are subject to the marking requirements contained elsewhere in this subpart.

(j) PCB Transformer locations shall be marked as follows:

(1) Except as provided in paragraph (j)(2) of this section, as of December 1, 1985, the vault door, machinery room door, fence, hallway, or means of access, other than grates and manhole covers, to a PCB Transformer must be marked with the mark M_L as required by paragraph (a) of this section.

(2) A mark other than the M_L mark may be used provided all of the following conditions are met:

(i) The program using such an alternative mark was initiated prior to August 15, 1985, and can be substantiated with documentation.

(ii) Prior to August 15, 1985, coordination between the transformer owner and the primary fire department occurred, and the primary fire department knows, accepts, and recognizes what the alternative mark means, and that this can be substantiated with documentation.

(iii) The EPA Regional Administrator in the appropriate region is informed in writing of the use of the alternative mark by October 3, 1988 and is provided with documentation that the program began before August 15, 1985, and documentation that demonstrates that prior to that date the primary fire department knew, accepted and recognized the meaning of the mark, and included this information in firefighting training.

(iv) The Regional Administrator will either approve or disapprove in writing the use of an alternative mark within 30 days of receipt of the documentation of a program.

(3) Any mark placed in accordance with the requirements of this section

must be placed in the locations described in paragraph (j)(1) of this section and in a manner that can be easily read by emergency response personnel fighting a fire involving this equipment.

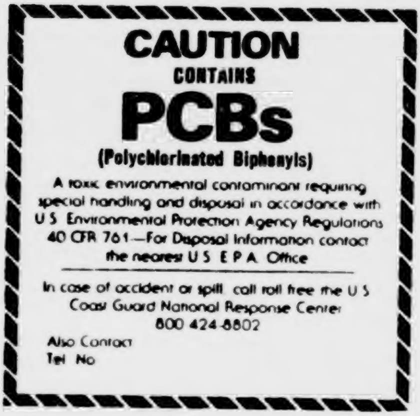
[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 47 FR 37359, Aug. 25, 1982; 50 FR 29201, July 17, 1985; 50 FR 32176, Aug. 9, 1985; 53 FR 12524, Apr. 15, 1988; 53 FR 27329, July 19, 1988]

§ 761.45 Marking formats.

The following formats shall be used for marking:

(a) *Large PCB Mark –M_L*. Mark M_L shall be as shown in Figure 1, letters and striping on a white or yellow background and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The size of the mark shall be at least 15.25 cm (6 inches) on each side. If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 5 cm (2 inches) on each side.

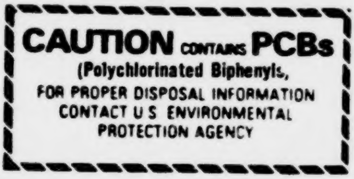
(b) *Small PCB Mark—M_s*. Mark M_s shall be as shown in Figure 2, letters and striping on a white or yellow background, and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The mark shall be a rectangle 2.5 by 5 cm (1 inch by 2 inches). If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 1 by 2 cm (.4 by .8 inches).



CAUTION
CONTAINS
PCBs
(Polychlorinated Biphenyls)
A toxic environmental contaminant requiring special handling and disposal in accordance with U S Environmental Protection Agency Regulations 40 CFR 761—For Disposal Information contact the nearest U S E P A Office

In case of accident or spill call toll free the U S Coast Guard National Response Center
800 424-8802
Also Contact
Tel No

Figure 1



CAUTION CONTAINS PCBs
(Polychlorinated Biphenyls,
FOR PROPER DISPOSAL INFORMATION
CONTACT U S ENVIRONMENTAL
PROTECTION AGENCY

Figure 2

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982]

Subpart D—Storage and Disposal

NOTE: This subpart does not require removal of PCBs and PCB Items from service and disposal earlier than would normally be the case. However, when PCBs and PCB Items are removed from service and disposed of, disposal must be undertaken in accordance with these regulations. PCBs (including soils and debris) and PCB Items which have been placed in a disposal site are considered to be "in service" for purposes of the applicability of this subpart. This subpart does not require PCBs and PCB Items landfilled prior to February 17, 1978 to be removed for disposal. However, if such PCBs or PCB Items are removed from the disposal site, they must be disposed of in accordance with this subpart. Other subparts are directed to the manufacture, processing, distribution in commerce, and use of PCBs and may result in some cases in disposal at an earlier date than would otherwise occur.

§ 761.60 Disposal requirements.

(a) *PCBs.* (1) Except as provided in paragraphs (a)(2), (3), (4), and (5) of this section, PCBs at concentrations of 50 ppm or greater must be disposed of in an incinerator which complies with § 761.70.

(2) Mineral oil dielectric fluid from PCB-Contaminated Electrical Equipment containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, must be disposed of in one of the following:

(i) In an incinerator that complies with § 761.70;

(ii) In a chemical waste landfill that complies with § 761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the mineral oil dielectric fluid does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that:

(A) The boiler complies with the following criteria:

(*1*) The boiler is rated at a minimum of 50 million BTU hours;

(*2*) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*3*) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*4*) The mineral oil dielectric fluid does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(*5*) The mineral oil dielectric fluid is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(*6*) The owner or operator of the boiler:

(*i*) Continuously monitors and records the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning mineral oil dielectric fluid; or

(*ii*) If the boiler will burn less th 30,000 gallons of mineral oil dielect fluid per year, measures and reco the carbon monoxide concentrat and excess oxygen percentage in t stack gas at regular intervals of longer than 60 minutes while burni mineral oil dielectric fluid.

(*7*) The primary fuel feed rates, m eral oil dielectric fluid feed rates, a total quantities of both primary fu and mineral oil dielectric fluid fed the boiler are measured and record at regular intervals of no longer th 15 minutes while burning mineral dielectric fluid.

(*8*) The carbon monoxide concentr tion and the excess oxygen percenta are checked at least once every ho that mineral oil dielectric fluid burned. If either measurement fal below the levels specified in this rul the flow of mineral oil dielectric flu to the boiler shall be stopped immed ately.

(B) Thirty days before any perso burns mineral oil dielectric fluid in th boiler, the person gives written notic to the EPA Regional Administrato for the EPA Region in which th boiler is located and that the notic contains the following information:

(*1*) The name and address of th owner or operator of the boiler an the address of the boiler;

(*2*) The boiler rating in units o BTU/hour;

(*3*) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when mineral oil dielectric fluid is burned; and

(*4*) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack.

(C) When burning mineral oil dielectric fluid, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (a)(2)(iii)(B)(*3*) of this section were taken.

(D) Any person burning mineral oil dielectric fluid in a boiler obtains the following information and retains the information for five years at the boiler location:

(*1*) The data required to be collected under paragraphs (a)(2)(A) (*6*) and (*7*) of this section; and

(*2*) The quantity of mineral oil dielectric fluid burned in the boiler each month;

(iv) In a facility that is approved in accordance with § 761.60(e). For the purpose of burning mineral oil dielectric fluid, an applicant under § 761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in paragraph (a)(2)(iii) of this section, or a § 761.70 approved incinerator.

(3) Liquids, other than mineral oil dielectric fluid, containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, shall be disposed of:

(i) In an incinerator which complies with § 761.70;

(ii) In a chemical waste landfill which complies with § 761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the waste does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that.

(A) The boiler complies with the following criteria:

(*1*) The boiler is rated at a minimum of 50 million BTU/hour;

(*2*) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*3*) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*4*) The waste does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(*5*) The waste is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(*6*) The owner or operator of the boiler must:

(*i*) Continuously monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning waste fluid; or

(*ii*) If the boiler will burn less than 30,000 gallons of waste fluid per year, measure and record the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning waste fluid;

(*7*) The primary fuel feed rate, waste fluid feed rate, and total quantities of both primary fuel and waste fluid fed to the boiler must be measured and recorded at regular intervals of no longer than 15 minutes while burning waste fluid; and

(*8*) The carbon monoxide concentration and the excess oxygen percentage must be checked at least once every hour that the waste is burned. If either measurement falls below the levels specified in this rule, the flow of waste to the boiler shall be stopped immediately.

(B) Prior to any person burning these liquids in the boiler, approval must be obtained from the EPA Regional Administrator for the EPA Region in which the boiler is located and any persons seeking such approval must submit to the EPA Regional Administrator a request containing at least the following information:

(*1*) The name and address of the owner or operator of the boiler and the address of the boiler;

(*2*) The boiler rating in units of BTU/hour;

(*3*) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when low concentration PCB liquid is burned;

(*4*) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack;

(*5*) The type of waste to be burned (e.g., hydraulic fluid, contaminated fuel oil, heat transfer fluid, etc.);

(*6*) The concentration of PCBs and of any other chlorinated hydrocarbon in the waste and the results of analyses using the American Society of Testing and Materials (ASTM) methods as follows: Carbon and hydrogen content using ASTM D-3178-84, nitrogen content using ASTM E-258-67 (Reapproved 1987), sulfur content using ASTM D-2784-80, D-1266-80, or D-129-64, chlorine content using ASTM D-808-81, water and sediment content using either ASTM D-2709-68 or D-1796-83, ash content using D-482-80, calorific value using ASTM D-240-87, carbon residue using either ASTM D-2158-85 or D-524-81, and flash point using ASTM D-93-85.

(*7*) The quantity of wastes estimated to be burned in a thirty (30) day period;

(*8*) An explanation of the procedures to be followed to insure that burning the waste will not adversely affect the operation of the boiler such that combustion efficiency will decrease.

(C) On the basis of the information in paragraph (a)(3)(iii)(B) of this section and any other available information, the Regional Administrator may, at his discretion, find that the alternate disposal method will not present an unreasonable risk of injury to health or the environment and approve the use of the boiler;

(D) When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (a)(3)(iii)(B)(*3*) of this section were taken; and

(E) Any person burning liquids in boilers approved as provided in paragraph (a)(3)(iii)(C) of this section, must obtain the following information and retain the information for five years at the boiler location:

(*1*) The data required to be collected in paragraphs (a)(3)(iii)(A) (*6*) and (*7*) of this section;

(*2*) The quantity of low concentration PCB liquid burned in the boiler each month.

(*3*) The analysis of the waste required by paragraph (a)(3)(iii)(B)(*6*) of this section taken once a month for each month during which low concentration PCB liquid is burned in the boiler.

(iv) In a facility that is approved in accordance with § 761.60(e). For the purpose of burning liquids, other than mineral oil dielectric fluid, containing 50 ppm or greater PCB, but less than 500 ppm PCB, an applicant under § 761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in § 761.60(a)(2)(iii), or a § 761.70 incinerator.

(4) Any non-liquid PCBs at concentrations of 50 ppm or greater in the form of contaminated soil, rags, or other debris shall be disposed of:

(i) In an incinerator which complies with § 761.70; or

(ii) In a chemical waste landfill which complies with § 761.75.

NOTE: Except as provided in § 761.75(b)(8)(ii), liquid PCBs shall not be processed into non-liquid forms to circumvent the high temperature incineration requirements of § 761.60(a).

(5) All dredged materials and municipal sewage treatment sludges that contain PCBs at concentrations of 50 ppm or greater shall be disposed of:

(i) In an incinerator which complies with § 761.70,

(ii) In a chemical waste landfill which complies with § 761.75; or

(iii) Upon application, using a disposal method to be approved by the Agency's Regional Administrator in the EPA Region in which the PCBs are located. Applications for disposal in a manner other than prescribed in paragraph (a)(5) (i) or (ii) of this section must be made in writing to the Regional Administrator. The application must contain information that, based on technical, environmental, and economic considerations, indicates that disposal in an incinerator or chemical waste landfill is not reasonable and appropriate, and that the alternate disposal method will provide adequate protection to health and the environment. The Regional Administrator may request other information that he or she believes to be necessary for evaluation of the alternate disposal method. Any approval by the Regional Administrator shall be in writing and may contain any appropriate limitations on the approved alternate method for disposal. In addition to these regulations, the Regional Administrator shall consider other applicable Agency guidelines, criteria, and regulations to ensure that the discharges of dredged material and sludges that contain PCBs and other contaminants are adequately controlled to protect the environment. The person to whom such approval is issued must comply with all limitations contained in the approval.

(6) When storage is desired prior to disposal, PCBs at concentrations of 50 ppm or greater shall be stored in a facility which complies with § 761.65.

(b) *PCB Articles*—(1) *Transformers.* (i) PCB Transformers shall be disposed of in accordance with either of the following:

(A) In an incinerator that complies with § 761.70; or

(B) In a chemical waste landfill which complies with § 761.75; *Provided,* That the transformer is first drained of all free flowing liquid, filled with solvent, allowed to stand for at least 18 hours, and then drained thoroughly. PCB liquids that are removed shall be disposed of in accordance with paragraph (a) of this section. Solvents may include kerosene, xylene, toluene and other solvents in which PCBs are readily soluble. Precautionary measures should be taken, however, that the solvent flushing procedure is conducted in accordance with applicable safety and health standards as required by Federal or State regulations.

(ii) [Reserved]

(2) *PCB Capacitors.* (i) The disposal of any capacitor shall comply with all requirements of this subpart unless it is known from label or nameplate information, manufacturer's literature (including documented communications with the manufacturer), or chemical analysis that the capacitor does not contain PCBs.

(ii) Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of paragraph (b)(2)(iv) of this section.

(iii) Any PCB Large High or Low Voltage Capacitor which contains 500 ppm or greater PCBs, owned by any person, shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator that complies with § 761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill that complies with § 761.75.

(iv) Any PCB Small Capacitor owned by any person who manufactures or at any time manufactured PCB Capacitors or PCB Equipment and acquired the PCB Capacitors in the course of such manufacturing shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator which complies with § 761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill which complies with § 761.75.

(v) Notwithstanding the restrictions imposed by paragraph (b)(2)(iii)(B) or (b)(2)(iv)(B) of this section, PCB capacitors may be disposed of in PCB chemical waste landfills that comply with § 761.75 subsequent to March 1, 1981, if the Assistant Administrator for Pesticides and Toxic Substances publishes a notice in the FEDERAL REGISTER declaring that those landfills are available for such disposal and explaining the reasons for the extension or reopening. An extension or reopening for disposal of PCB capacitors that is granted under this subsection shall be subject to such terms and conditions as the Assistant Administrator may prescribe and shall be in effect for such period as the Assistant Administrator may prescribe. The Assistant Administrator may permit disposal of PCB capacitors in EPA approved chemical waste landfills after March 1, 1981, if in his opinion,

(A) Adequate incineration capability for PCB capacitors is not available, or

(B) The incineration of PCB capacitors will significantly interfere with the incineration of liquid PCBs, or

(C) There is other good cause shown.

As part of this evaluation, the Assistant Administrator will consider the impact of his action on the incentives to construct or expand PCB incinerators.

(vi) Prior to disposal in a § 761.75 chemical waste landfill, all large PCB capacitors, and all small PCB capacitors described in paragraph (b)(2)(iv) of this section, shall be placed in one of the Department of Transportation specification containers identified in § 761.65(c)(6) or in containers that comply with 49 CFR 178.118 (specification 17H containers). Large PCB capacitors which are too big to fit inside one of these containers shall be placed in a container with strength and durability equivalent to the DOT specification containers. In all cases, interstitial space in the container shall be filled with sufficient absorbent material (such as sawdust or soil) to absorb any liquid PCBs remaining in the capacitors.

(3) *PCB hydraulic machines.* PCB hydraulic machines containing PCBs at concentrations of 50 ppm or greater such as die casting machines may be disposed of as municipal solid waste or salvage provided that the machines are drained of all free-flowing liquid and the liquid is disposed of in accordance with the provisions of paragraph (a) of this section. If the PCB liquid contains 1000 ppm PCB or greater, then the hydraulic machine must be flushed prior to disposal with a solvent containing less than 50 ppm PCB under transformer solvents at paragraph (b)(1)(i)(B) of this section and the solvent disposed of in accordance with paragraph (a) of this section.

(4) *PCB-Contaminated Electrical Equipment.* All PCB-Contaminated Electrical Equipment except capacitors shall be disposed of by draining all free flowing liquid from the electrical equipment and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained electrical equipment is not regulated by this rule. Capacitors that contain between 50 and 500 ppm PCBs shall be disposed of in an incinerator that complies with § 761.70 or in a chemical waste landfill that complies with § 761.75.

(5) *Other PCB Articles.* (i) PCB articles with concentrations at 500 ppm or greater must be disposed of:

(A) In an incinerator that complies with § 761.70; or

(B) In a chemical waste landfill that complies with § 761.75, provided that all free-flowing liquid PCBs have been thoroughly drained from any articles before the articles are placed in the chemical waste landfill and that the drained liquids are disposed of in an incinerator that complies with § 761.70.

(ii) PCB Articles with a PCB concentration between 50 and 500 ppm must be disposed of by draining all free flowing liquid from the article and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained article is not regulated by this rule.

(6) *Storage of PCB Articles.* Except for a PCB Article described in paragraph (b)(2)(ii) of this section and hydraulic machines that comply with the municipal solid waste disposal provisions described in paragraph (b)(3) of this section, any PCB Article, with PCB concentrations at 50 ppm or greater, shall be stored in accordance with § 761.65 prior to disposal.

(c) *PCB Containers.* (1) Unless decontaminated in compliance with § 761.79 or as provided in paragraph (c)(2) of this section, a PCB container with PCB concentrations at 500 ppm or greater shall be disposed of:

(i) In an incinerator which complies with § 761.70, or

(ii) In a chemical waste landfill that complies with § 761.75; provided that if there are PCBs in a liquid state, the PCB Container shall first be drained and the PCB liquid disposed of in accordance with paragraph (a) of this section.

(2) Any PCB Container used to contain only PCBs at a concentration less than 500 ppm shall be disposed of as municipal solid wastes; provided that if the PCBs are in a liquid state, the PCB Container shall first be drained and the PCB liquid shall be disposed of in accordance with paragraph (a) of this section.

(3) Prior to disposal, a PCB container with PCB concentrations at 50 ppm or greater shall be stored in a facility which complies with § 761.65.

(d) *Spills.* (1) Spills and other uncontrolled discharges of PCBs at concentrations of 50 ppm or greater constitute the disposal of PCBs.

(2) PCBs resulting from the clean-up and removal of spills, leaks, or other uncontrolled discharges, must be

stored and disposed of in accordance with paragraph (a) of this section.

(3) These regulations do not exempt any person from any actions or liability under other statutory authorities, including but not limited to the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

(e) Any person who is required to incinerate any PCBs and PCB Items under this subpart and who can demonstrate that an alternative method of destroying PCBs and PCB Items exists and that this alternative method can achieve a level of performance equivalent to § 761.70 incinerators or high efficiency boilers as provided in paragraphs (a)(2)(iv) and (a)(3)(iv) of this section, may submit a written request to either the Regional Administrator or the Director, Exposure Evaluation Division for an exemption from the incineration requirements of § 761.70 or § 761.60. Requests for approval of alternate methods that will be operated in more than one region must be submitted to the Director, Exposure Evaluation Division except for research and development involving less than 500 pounds of PCB material (see paragraph (i)(2) of this section). Requests for approval of alternate methods that will be operated in only one region must be submitted to the appropriate Regional Administrator. The applicant must show that his method of destroying PCBs will not present an unreasonable risk of injury to health or the environment. On the basis of such information and any available information, the Regional Administrator or the Director, Exposure Evaluation Division may, in his discretion, approve the use of the alternate method if he finds that the alternate disposal method provides PCB destruction equivalent to disposal in a § 761.70 incinerator or a § 761.60 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may contain such conditions and provisions as the Regional Administrator or Director, Exposure Evaluation Division deems appropriate. The person to whom such waiver is issued must comply with all limitations contained in such determination.

(f)(1) Each operator of a chemical waste landfill, incinerator, or alternative to incineration approved under paragraph (e) of this section shall give the following written notices to the state and local governments within whose jurisdiction the disposal facility is located:

(i) Notice at least thirty (30) days before a facility is first used for disposal of PCBs required by these regulations; and

(ii) At the request of any state or local government, annual notice of the quantities and general description of PCBs disposed of during the year. This annual notice shall be given no more than thirty (30) days after the end of the year covered.

(iii) The Regional Administrator may reduce the notice period required by paragraph (f)(1)(i) of this section from thirty days to a period of no less than five days in order to expedite interim approval of the chemical waste landfill located in Sedgwick County, Kansas.

(2) Any person who disposes of PCBs under a paragraph (a)(5)(iii) of this section incineration or chemical waste landfilling waiver shall give written notice at least thirty (30) days prior to conducting the disposal activities to the state and local governments within whose jurisdiction the disposal is to take place.

(g) *Testing procedures.* (1) Owners or users of mineral oil dielectric fluid electrical equipment may use the following procedures to determine the concentration of PCBs in the dielectric fluid:

(i) Dielectric fluid removed from mineral oil dielectric fluid electrical equipment may be collected in a common container, provided that no other chemical substances or mixtures are added to the container. This common container option does not permit dilution of the collected oil. Mineral oil that is assumed or known to contain at least 50 ppm PCBs must not be mixed with mineral oil that is known or assumed to contain less than 50 ppm PCBs to reduce the concentration of PCBs in the common container. If dielectric fluid from untested, oil-filled circuit breakers, reclosers, or cable is collected in a common container with dielectric fluid from other oil-filled electrical equipment, the entire contents of the container must be treated as PCBs at a concentration of at least 50 ppm, unless all of the fluid from the other oil-filled electrical equipment has been tested and shown to contain less than 50 ppm PCBs.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration, except that if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of this subparagraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with ASTM D 923-86 or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(2) Owners or users of waste oil may use the following procedures to determine the PCB concentration of waste oil:

(i) Waste oil from more than one source may be collected in a common container, provided that no other chemical substances or mixtures, such as non-waste oils, are added to the container.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration. *Except*, That if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of t paragraph, representative samples mineral oil dielectric fluid are eith samples taken in accordance w ASTM D 923-86 or samples tak from a container that has been th oughly mixed in a manner such th any PCBs in the container are u formly distributed throughout t liquid in the container.

(h) Requirements for export a import of PCBs for purposes of dispo al and PCB Items for purposes of d posal are fcund in § 761.20.

(i) *Approval authority for dispos methods.* (1) The officials (the Dire tor, Exposure Evaluation Division a the Regional Administrators) desi nated in §§ 761.60(e) and 761.70(a) a (b) to receive requests for approval PCB disposal activities are the p mary approval authorities for thes activities. Notwithstanding, the Dire tor, Exposure Evaluation Divisio may, at his/her discretion, assign th authority to review and approve an aspect of a disposal system to th Office of Pesticides and Toxic Sub stances or to a Regional Administra tor.

(2) Except for activity authorize under § 761.30(j), research and devel opment (R and D) into PCB disposa methods using a total of less than 50 pounds of PCB material (regardless o PCB concentration) will be reviewe and approved by the appropriate EP Regional Administrator and researc and development using 500 pounds o more of PCB material (regardless o PCB concentration) will be reviewe by the approval authorities set out i §§ 761.60(e) and 761.70(a) and (b).

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (U.S.C. 2605)

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§ 761.65 Storage for disposal.

This section applies to the storage for disposal of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater.

(a) Any PCB Article or PCB Container stored for disposal before January 1, 1983, shall be removed from storage and disposed of as required by this part before January 1, 1984. Any PCB Article or PCB Container stored for disposal after January 1, 1983, shall be removed from storage and disposed of as required by subpart D of this part within one year from the date when it was first placed into storage.

(b) Except as provided in paragraph (c) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following requirements:

(1) The facilities shall meet the following criteria:

(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;

(ii) An adequate floor which has continuous curbing with a minimum six inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container stored therein or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored therein, whichever is greater;

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;

(iv) Floors and curbing constructed of continuous smooth and impervious materials, such as Portland cement concrete or steel, to prevent or minimize penetration of PCBs; and

(v) Not located at a site that is below the 100-year flood water elevation.

(2) [Reserved]

(c)(1) The following PCB Items may be stored temporarily in an area that does not comply with the requirements of paragraph (b) of this section for up to thirty days from the date of their removal from service, provided that a notation is attached to the PCB Item or a PCB Container (containing the item) indicating the date the item was removed from service:

(i) Non-leaking PCB Articles and PCB Equipment;

(ii) Leaking PCB Articles and PCB Equipment if the PCB Items are placed in a non-leaking PCB Container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB Items;

(iii) PCB Containers containing non-liquid PCBs such as contaminated soil, rags, and debris; and

(iv) PCB Containers containing liquid PCBs at a concentration between 50 and 500 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with 40 CFR Part 112. In addition, each container must bear a notation that indicates that the liquids in the drum do not exceed 500 ppm PCB.

(2) Non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Electrical Equipment that have not been drained of free flowing dielectric fluid may be stored on pallets next to a storage facility that meets the requirements of paragraph (b) of this section. PCB-Contaminated Electrical Equipment that has been drained of free flowing dielectric fluid is not subject to the storage provisions of § 761.65. Storage under this subparagraph will be permitted only when the storage facility has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the facility. The capacitors and equipment temporarily stored outside the facility shall be checked for leaks weekly.

(3) Any storage area subject to the requirements of paragraph (b) or paragraph (c)(1) of this section shall be marked as required in subpart C—§ 761.40(a)(10).

(4) No item of movable equipment that is used for handling PCBs and PCB Items in the storage facilities and that comes in direct contact with PCBs shall be removed from the storage facility area unless it has been decontaminated as specified in § 761.79.

(5) All PCB Articles and PCB Containers in storage shall be checked for

leaks at least once every 30 days. Any leaking PCB Articles and PCB Containers and their contents shall be transferred immediately to properly marked non-leaking containers. Any spilled or leaked materials shall be immediately cleaned up, using sorbents or other adequate means, and the PCB-contaminated materials and residues shall be disposed of in accordance with § 761.60(a)(4).

(6) Except as provided in paragraph (c)(7) of this section, any container used for the storage of liquid PCBs shall comply with the Shipping Container Specification of the Department of Transportation (DOT), 49 CFR 178.80 (Specification 5 container without removable head), 178.82 (Specification 5B container without removable head), 178.102 (Specification 6D overpack with Specification 2S(§ 178.35) or 2SL(§ 178.35a) polyethylene containers) or 178.116 (Specification 17E container). Any container used for the storage of non-liquid PCBs shall comply with the specifications of 49 CFR 178.80 (Specification 5 container), 178.82 (Specification 5B container) or 178.115 (Specification 17C container). As an alternate, containers larger than those specified in DOT Specifications 5, 5B, or 17C may be used for non-liquid PCBs if the containers are designed and constructed in a manner that will provide as much protection against leaking and exposure to the environment as the DOT Specification containers, and are of the same relative strength and durability as the DOT Specification containers.

(7) Storage containers for liquid PCBs can be larger than the containers specified in paragraph (c)(6) of this section provided that:

(i) The containers are designed, constructed, and operated in compliance with Occupational Safety and Health Standards, 29 CFR 1910.106, *Flammable and combustible liquids.* Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers (see 29 CFR 1910.106(b)(1)(i)(*f*)).

(ii) The owners or operators of any facility using containers described in paragraph (c)(7)(i) of this section shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in Part 112 of this title. In complying with 40 CFR Part 112, the owner or operator shall read "oil(s)" as "PCB(s)" whenever it appears. The exemptions for storage capacity, 40 CFR 112.1(d)(2), and the amendment of SPCC plans by the Regional Administrator, 40 CFR 112.4, shall not apply unless some fraction of the liquids stored in the container are oils as defined by section 311 of the Clean Water Act.

(8) PCB Articles and PCB Containers shall be dated on the article or container when they are placed in storage. The storage shall be managed so that the PCB Articles and PCB Containers can be located by the date they entered storage. Storage containers provided in paragraph (c)(7) of this section, shall have a record that includes for each batch of PCBs the quantity of the batch and date the batch was added to the container. The record shall also include the date, quantity, and disposition of any batch of PCBs removed from the container.

(9) Owners or operators of storage facilities shall establish and maintain records as provided in § 761.180.

(d) *Approval of commercial storers of PCB waste.* (1) All commercial storers of PCB waste shall have interim approval to operate commercial facilities for the storage of PCB waste until August 2, 1990. Commercial storers of PCB waste are prohibited from storing any PCB waste at their facilities after August 2, 1990 unless they have submitted by August 2, 1990 a complete application for a final storage approval under paragraph (d)(2) of this section. The period of interim approval shall continue until the Regional Administrator (or the Director of the Exposure Evaluation Division (Director, EED) in cases involving commercial storage ancillary to a facility approved for disposal by the Director, EED) makes a final decision on the storage application at which time such interim approval shall terminate.

(2) The Regional Administrator for the region in which the storage facili-

y is located (or the Director, EED, if
he commercial storage area is ancil-
ary to a facility approved for disposal
y the Director, EED) shall grant writ-
en, final approval to engage in the
ommercial storage of PCB waste
pon a determination by the Regional
dministrator or the Director, EED,
hat the criteria in paragraph (d)(2)(i)
hrough (d)(2)(vii) of this section have
een met by the applicant:

(i) The applicant, its principals, and
s key employees responsible for the
stablishment or operation of the com-
ercial storage facility are qualified to
ngage in the business of commercial
orage of PCB waste.

(ii) The facility possesses the capac-
y to handle the quantity of PCB
aste which the owner or operator of
e facility has estimated will be the
aximum quantity of PCB waste that
ll be handled at any one time at the
cility.

(iii) The owner or operator of the fa-
ity has certified compliance with
e storage facility standards in para-
aphs (b) and (c)(7) of this section.

iv) The owner or operator has de-
loped a written closure plan for the
cility that is deemed acceptable by
e Regional Administrator (or the Di-
ctor, EED, if the commercial storage
ancillary to a disposal facility per-
tted by the Director, EED) under
e closure plan standards of para-
aph (e) of this section.

v) The owner or operator has in-
ded in the application for final ap-
oval a demonstration of financial re-
onsibility for closure that meets the
ancial responsibility standards of
ragraph (g) of this section.

vi) The operation of the storage fa-
ty will not pose an unreasonable
k of injury to health or the environ-
nt.

vii) The environmental compliance
tory of the applicant, its principals,
l its key employees shall be deemed
constitute a sufficient basis for
ial of approval whenever in the
gment of the Regional Administra-
(or Director, EED) two or more re-
ed civil violations or a single envi-
mental criminal conviction evi-
ce a pattern or practice of non
npliance that demonstrate the ap-
ant's unwillingness or inability to
achieve and maintain its operations in a compliance status.

(3) Applicants for storage approvals shall submit a written application that includes any relevant information bearing upon the qualifications of the facility's principals and key employees to engage in the business of commercial storage of PCB wastes. This information shall include, but is not limited to:

(i) The identification of the owner and the operator of the facility, including all general partners of a partnership, any limited partner of a partnership, any stockholder of a corporation or any participant in any other type of business organization or entity who owns or controls, directly or indirectly, more than 5 percent of each partnership, corporation, or other business organization and all officials of the facility who have direct management responsibility for the facility.

(ii) The identification of the person responsible for the overall operations of the facility (i.e., a plant manager, superintendent, or a person of similar responsibility) and the supervisory employees who are or will be responsible for the operation of the facility.

(iii) Information concerning the technical qualifications and experience of the persons responsible for the overall operation of the facility and the employees responsible for handling PCB waste or other wastes.

(iv) Information concerning any past State or Federal environmental violations involving the same business or another business with which the principals or supervisory employees were affiliated directly that occurred within 5 years preceding the date of submission and which relate directly to violations that resulted in either a civil penalty (irrespective of whether the matter was disposed of by an adjudication or by a without prejudice settlement) or judgment of conviction whether entered after trial or a plea, either of guilt or nolo contendere or civil injunctive relief and involved storage, disposal, transport, or other waste handling activities.

(v) A list of all companies currently owned or operated in the past by the principals or key employees identified in paragraphs (d)(3)(i) and (d)(3)(ii) of this section that are or were directly or indirectly involved with waste handling activities.

(vi) The owner's or operator's estimate of maximum PCB waste quantity to be handled at the facility.

(vii) A written statement certifying compliance with paragraph (b) or (c) of this section and containing a certification as defined in § 761.3.

(viii) A written closure plan for the facility, as described in paragraph (e) of this section.

(ix) The current closure cost estimate for the facility, as described in paragraph (f) of this section.

(x) A demonstration of financial responsibility to close the facility, as described in paragraph (g) of this section.

(4) The written approval issued by the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED) shall include, but not be limited to, the following:

(i) The determination that the applicant has satisfied the requirements set forth in paragraph (d)(2) of this section, and a brief statement setting forth the basis for the determination.

(ii) Incorporation of the closure plan submitted by the facility owner or operator and approved by the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED).

(iii) A condition imposing a maximum PCB storage capacity which the facility shall not exceed during its PCB waste storage operations. The maximum storage capacity imposed under this condition shall not be greater than the estimated maximum inventory of PCB waste included in the owner's or operator's application for final approval.

(iv) Such other conditions as deemed necessary by the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED) to ensure that the operations of the PCB storage facility will not pose an unreasonable risk of injury to health or the environment.

(5) Storage areas at transfer facilities are exempt from the requirement to obtain approval as a commercial storer of PCB waste under this paragraph, unless the same PCB waste is stored at these facilities for a period of time greater than 10 consecutive days between destinations.

(6) Storage areas at RCRA-permitted facilities may be exempt from the separate TSCA storage approval requirements in this paragraph (d) upon a showing to the Regional Administrator's satisfaction that the facility's existing RCRA closure plan is substantially equivalent to this rule's closure plan standards, and that such facility's closure cost estimate and financial assurance demonstration account for maximum PCB waste inventories, and the requirements of paragraph (d)(3)(i) through (d)(3)(v) and (d)(3)(vii) of this section are met. A pay-in period of longer than 3 years after approval of the storage facility pursuant to this rule, will be acceptable to EPA if that pay-in period has already been established for a valid RCRA facility or previously approved TSCA facility.

(7) Storage areas ancillary to TSCA-approved disposal facilities may be exempt from a separate facility approval provided all of the following conditions are met:

(i) The current disposal approval contains an expiration date.

(ii) The current disposal approval's closure and financial responsibility conditions specifically extend to storage areas ancillary to disposal.

(iii) The current disposal approval's closure and financial responsibility conditions provide for annual adjustments for inflation, and for modification when changes in operation would affect closure costs.

(iv) The current disposal approval contains conditions on closure and financial responsibility that are at least as stringent as those in paragraphs (e) and (g) of this section. However, the provision for a 3-year closure trust pay-in period, as specified in paragraph (g)(1)(i) of this section, would be waived in a case in which an approved TSCA facility or RCRA facility that covers PCB storage has a longer pay-in period for the trust.

(v) The current disposal approval satisfies the requirements of paragraph (d)(3)(i) through (d)(3)(v) of this section.

(8) The approval of any existing TSCA-approved disposal facility ancillary to a commercial storage facility that is deficient in any of the conditions of paragraph (d)(7)(i) through (d)(7)(v) of this section shall be called in by the Regional Administrator or the Director, EED, if it was the Director, EED who issued it. The approval shall be modified to meet the requirements of paragraph (d)(7) of this section within 180 days of the effective date of this final rule, or a separate application for approval of the storage facility may be submitted to the Regional Administrator or the Director, EED, in the cases where the Director, EED issued the approval.

(e) *Closure.* (1) A commercial storer of PCB waste shall have a written clo- ure plan that identifies the steps that he owner or operator of the facility hall take to close the PCB waste stor- ge facility in a manner that elimi- ates the potential for post-closure re- eases of PCBs which may present an nreasonable risk to human health or he environment. An acceptable clo- ure plan must include, at a minimum, ll of the following:

(i) A description of how the PCB orage areas of the facility will be losed in a manner that eliminates the otential for post-closure releases of CBs into the environment.

(ii) An identification of the maxi- um extent of storage operations that ill be open during the active life of e facility, including an identification the extent of PCB storage oper- ions at the facility relative to other astes that will be handled at the fa- ility.

(iii) An estimate of the maximum in- ntory of PCB wastes that could be ndled at one time at the facility er its active life, and a detailed de- ription of the methods or arrange- ents to be used during closure for re- oving, transporting, storing, or dis- sing of the facility's inventory of CB waste, including an identification any off-site facilities that will be ed.

(iv) A detailed description of the steps needed to remove or decontaminate PCB waste residues and contaminated containment system components, equipment, structures, and soils during closure in accordance with the levels specified in the PCB Spills Cleanup Policy in subpart G of this part, including a description of the methods for sampling and testing of surrounding soils, and the criteria for determining the extent of removal or decontamination.

(v) A detailed description of other activities necessary during the closure period to ensure that any post-closure releases of PCBs will not present unreasonable risks to human health or the environment. This includes activities such as ground-water monitoring, run-on and run-off control, and facility security.

(vi) A schedule for closure of each area of the facility where PCB waste is stored or handled, including the total time required to close each area of PCB waste storage or handling, and the time required for any intervening closure activities.

(vii) An estimate of the expected year of closure of the PCB waste storage areas, if a trust fund is opted for as the financial mechanism.

(2) A written closure plan determined to be acceptable by the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED) under this section shall become a condition of any approval granted under paragraph (d) of this section.

(3) A separate and new closure plan need not be submitted in cases where a facility is currently covered by a TSCA approval or a RCRA permit, upon a showing to the satisfaction of the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED) that the existing closure plan is substantially equivalent to closure plans required under paragraphs (d) through (g) of this section, and that the plan adequately accounts for PCB waste inventories.

(4) The commercial storer of PCB waste shall submit a written request to

the Regional Administrator (or the Director, EED, if he approved the closure plan) for a modification to its storage approval to amend its closure plan, whenever:

(i) Changes in ownership, operating plans, or facility design affect the existing closure plan.

(ii) There is a change in the expected date of closure, if applicable.

(iii) In conducting closure activities, unexpected events require a modification of the approved closure plan.

(5) The Regional Administrator or the Director, EED, if he approved the closure plan, may modify the existing closure plan under the conditions described in paragraph (e)(4) of this section.

(6) Commercial storers of PCB waste shall comply with the following closure schedule:

(i) The commercial storer shall notify in writing the Regional Administrator or the Director, EED if he approved the closure plan, at least 60 days prior to the date on which final closure of its PCB storage facility is expected to begin.

(ii) The date when a commercial storer of PCB waste "expects to begin closure" shall be no later than 30 days after the date on which the storage facility received its final quantities of PCB waste. For good cause shown, the Regional Administrator or the Director, EED if he approved the closure plan, may extend the date for commencement of closure for an additional 30-day period.

(iii) Within 90 days after receiving the final quantity of PCB waste for storage, a commercial storer of PCB waste shall remove all PCB waste in storage at the facility from the facility in accordance with the approved closure plan. For good cause shown, the Regional Administrator or the Director, EED if he approved the closure plan, may approve a reasonable extension to the period for removal of the PCB waste.

(iv) A commercial storer of PCB waste shall complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final quantity of PCB waste for storage at the facility. For good cause shown, the Regional Administrator or Director, EED if he approved the closure plan, may approve a reasonable extension to the closure period.

(7) During the closure period, all contaminated system components, equipment, structures, and soils shall be disposed of in accordance with the disposal requirements of subpart D of this part, or, if applicable, decontaminated in accordance with the levels specified in the PCB Spills Cleanup Policy at subpart G of this part. When PCB waste is removed from the storage facility during closure, the owner or operator becomes a generator of PCB waste subject to the generator requirements of subpart J of this part.

(8) Within 60 days of completion of closure of each facility for the storage of PCB waste, the commercial storer of PCB waste shall submit to the Regional Administrator (or Director, EED if he approved the closure plan), by registered mail, a certification that the PCB storage facility has been closed in accordance with the approved closure plan. The certification shall be signed by the owner or operator and by an independent registered professional engineer.

(f) *Closure cost estimate.* (1) A commercial storer of PCB wastes shall have a detailed estimate, in current dollars, of the cost of closing the facility in accordance with its approved closure plan. The closure cost estimate shall be in writing, be certified by the person preparing it (using the certification defined in § 761.3) and comply with all of the following criteria:

(i) The closure cost estimate shall equal the cost of final closure at the point in the PCB storage facility's active life when the extent and manner of PCB storage operations would make closure the most expensive, as indicated by the facility's closure plan.

(ii) The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility, and the third party shall not be either a corporate parent or subsidiary of the owner or operator, or member in joint ownership of the facility.

(iii) The owner or operator shall include in the estimate the current market costs for off-site commercial disposal of the facility's maximum estimated inventory of PCB wastes, except that on-site disposal costs may be used if on-site disposal capacity will exist at the facility at all times over the life of the PCB storage facility.

(iv) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of wastes, facility structures or equipment, land, or other assets associated with the facility at the time of closure.

(2) During the active life of the PCB storage facility, the commercial storer of PCB waste shall adjust annually for inflation the closure cost estimate within 60 days prior to the anniversary date of the establishment of the financial instruments used to demonstrate financial responsibility for closure, except that owners or operators who use the financial test or corporate guarantee shall adjust their closure cost estimates for inflation within 30 days after the close of the storer's fiscal year. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its *Survey of Current Business*. The Implicit Price Deflator for Gross National Product is included in a monthly publication titled *Economic Indicators*, which is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The inflation factor used in the latter method is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The adjustment to the closure cost estimate is then made by multiplying the most recent closure cost estimate by the latest inflation factor.

(3) Where the Regional Administrator (or the Director, EED, if he approved the closure plan) approves a modification to the facility's closure plan, and that modification increases the cost of closure, the owner or operator shall revise the closure cost estimate no later than 30 days after the modification is approved. Any such revision shall also be adjusted for inflation in accordance with paragraph (f)(2) of this section.

(4) The owner or operator of the facility shall keep at the facility during its operating life the most recent closure cost estimate, including any adjustments resulting from inflation or from modifications to the closure plan.

(g) *Financial assurance for closure.* A commercial storer of PCB waste shall establish financial assurance for closure of each PCB storage facility that he owns or operates. In establishing financial assurance for closure, the commercial storer of PCB waste may choose from the following financial assurance mechanisms or any combination of mechanisms:

(1) The "closure trust fund," as specified in § 264.143(a) of this chapter, except for paragraph (a)(3) of § 264.143. For purposes of this paragraph, the following provisions also apply:

(i) Payments into the trust fund shall be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan, or over 3 years, whichever period is shorter. This period of time is hereafter referred to as the "pay-in period." For an existing facility, the first payment must be made within 30 calendar days after EPA has notified the facility of its conditional approval. Interim approval to operate is canceled and the application is denied if EPA does not receive verification that the payment was made in that 30-day period.

(ii) For a new facility, the first payment into the closure trust fund shall be made before EPA grants final approval of the application and before the facility may accept the initial shipment of PCB waste for commercial storage. A receipt from the trustee shall be submitted by the owner or operator to the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director EED) before this initial delivery of PCB waste. The first payment shall be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period, except as provided in paragraph (g)(7) of this section for multiple mechanisms. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iii) If an owner or operator of a facility existing on the effective date of this paragraph establishes a trust fund to meet the financial assurance requirements of this paragraph, and the value of the trust fund is less than the current closure cost estimate when a final approval is granted for the facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period as defined in paragraph (g)(1)(i) of this section. Payments shall continue to be made no later than 30 days after each anniversary date of the first payment made into the trust fund. The amount of each payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iv) The submission of a trust agreement with the wording specified in § 264.151(a)(1) of this chapter, including any reference to hazardous waste management facilities, shall be deemed to be in compliance with the requirement to submit a trust agreement under this subpart.

(2) The "surety bond guaranteeing payment into a closure trust fund," as specified in § 264.143(b) of this chapter, including the use of the surety bond instrument specified at § 264.151(b) of this chapter and the standby trust specified at § 264.143(b)(3) of this chapter. The use of the surety bonds, surety bond instruments, and standby trust agreements specified in §§ 264.143(b) and 264.151(b) of this chapter shall be deemed to be in compliance with this subpart.

(3)(i) The "surety bond guaranteeing performance of closure," as specified at § 264.143(c) of this chapter, except for paragraph (c)(5) of § 264.143 of this chapter. The submission and us of the surety bond instrument spec fied at § 264.151(c) of this chapter an the standby trust specified a § 264.143(c)(3) of this chapter shall b deemed to be in compliance with th requirements under this subpart relating to the use of surety bonds an standby trust funds.

(ii) For the purposes of this paragraph, and under the terms of th bond, the surety shall become liabl on the bond obligation when th owner or operator fails to perform a guaranteed by the bond. Liability is established by a final administrative determination pursuant to section 16 o TSCA that the owner or operator ha failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(4)(i) The "closure letter of credit" specified in § 264.143(d) of this chapter, except for paragraph (d)(8). The submission and use of the irrevocable letter of credit instrument specified in § 264.151(d) of this chapter and the standby trust specified in § 264.143(d)(3) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of letters of credit and standby trust funds.

(ii) For the purposes of this paragraph, the Regional Administrator (or the Director, EED, if the commercial storage area is ancillary to a disposal facility approved by the Director, EED) may draw on the letter of credit following a final administrative determination pursuant to section 16 of TSCA that the owner or operator has failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(5) "Closure insurance," as specified in § 264.143(e) of this chapter, utilizing the certificate of insurance for closure specified at § 264.151(e) of this chapter. The use of closure insurance as specified in § 264.143(e) of this chapter and the submission and use of the certificate of insurance specified in § 264.151(e) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of closure insurance.

(6) The "financial test and corporate guarantee for closure," as described in § 264.143(f) of this chapter, including a letter signed by the owner's or operator's chief financial officer as specified at § 264.151(f) of this chapter and, if applicable, the written corporate guarantee specified at § 264.151(h) of this chapter. The use of the financial test and corporate guarantee specified in § 264.143(f) of this chapter, the submission and use of the letter specified in § 264.151(f) of this chapter, and the submission and use of the written corporate guarantee specified at § 264.151(h) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of financial tests and corporate guarantees.

(7) The use of multiple financial mechanisms, as specified in § 264.143(g) of this chapter is permitted.

(h) *Release of owner or operator.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Regional Administrator or the Director, EED, if he approved the closure plan, will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain financial assurance for final closure of the facility, unless the Regional Administrator or the Director, EED, if he approved the closure plan, has reason to believe that final closure has not been completed in accordance with the approved closure plan. The Regional Administrator or the Director, EED, if he approved the closure plan, shall provide the owner or operator with a detailed written statement stating the reasons why he believed closure was not conducted in accordance with the approved closure plan.

(i) *Laboratories and samples.* (1) A laboratory is conditionally exempt from the notification and approval requirements for a commercial storer under § 761.65 (d) through (h) when it stores samples held for disposal in a facility that complies with the standards in § 761.65(b)(1)(i) through (b)(1)(iv).

(2) A laboratory sample is exempt from the manifesting requirements in § 761.208 when:

(i) The sample is being transported to a laboratory for the purpose of testing.

(ii) The sample is being transported back to the sample collector after testing.

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing.

(iv) The sample is being stored in a laboratory before testing.

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(3) In order to qualify for the exemption in paragraph (i)(2)(i) and (i)(2)(ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with applicable U.S. Department of Transportation (DOT) or U.S. Postal Service (USPS) shipping requirements, found respectively in 49 CFR 173.345 and U.S. Postal Regulations 652.2 and 652.3.

(ii) Assure that the following information accompanies the sample:

(A) The sample collector's name, mailing address, and telephone number.

(B) The laboratory's name, mailing address, and telephone number.

(C) The quantity of the sample.

(D) The date of shipment.

(E) A description of the sample.

(iii) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(4) When the concentration of the PCB sample has been determined, and its use is terminated, the sample must be properly disposed. A laboratory must either manifest the PCB waste to a disposer or commercial storer, as required under § 761.208, retain a copy of each manifest, as required under § 761.209, and follow up on exception reporting, as required under § 761.215 (a) and (b), or return the sample to

the sample collector who must then properly dispose of the sample. If the laboratory returns the sample to the sample collector, the laboratory must comply with the shipping requirements set forth in paragraph (i)(3)(i) through (i)(3)(iii) of this section.

(j) *States and the Federal Government.* States and the Federal Government are exempt from the requirements of paragraphs (f) and (g) of this section.

(Approved by the Office of Management and Budget under control number 2070-0112)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

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§ 761.70 Incineration.

This section applies to facilities used to incinerate PCBs required to be incinerated by this part.

(a) *Liquid PCBs.* An incinerator used for incinerating PCBs shall be approved by an EPA Regional Administrator or the Director, Exposure Evaluation Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than one region must be submitted to the Director, Exposure Evaluation Division, except for research and development involving less than 500 pounds of PCB material (see § 761.60(i)(2)). Requests for approval of incinerators to be used in only one region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (a)(1) through (9) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d)(4) of this section.

(1) Combustion criteria shall be either of the following:

(i) Maintenance of the introduced liquids for a 2-second dwell time at 1200°C(±100°C) and 3 percent excess oxygen in the stack gas; or

(ii) Maintenance of the introduced liquids for a 1½ second dwell time at 1600°C(±100°C) and 2 percent excess oxygen in the stack gas.

(2) Combustion efficiency shall be at least 99.9 percent computed as follows:

$$\text{Combustion efficiency} = [C_{co_2}/(C_{co_2} + C_{co})]100$$

where

C_{co_2} = Concentration of carbon dioxide.
C_{co} = Concentration of carbon monoxide.

(3) The rate and quantity of PCBs which are fed to the combustion system shall be measured and recorded at regular intervals of no longer than 15 minutes.

(4) The temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.

(5) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below the temperatures specified in paragraph (a)(1) of this section.

(6) Monitoring of stack emission products shall be conducted:

(i) When an incinerator is first used for the disposal of PCBs under the provisions of this regulation;

(ii) When an incinerator is first used for the disposal of PCBs after the incinerator has been modified in a manner which may affect the characteristics of the stack emission products; and

(iii) At a minimum such monitoring shall be conducted for the following parameters:

(*a*) O_2; (*b*) CO; (*c*) CO_2; (*d*) Oxides of Nitrogen (NO_x); (*e*) Hydrochloric Acid (HCl); (*f*) Total Chlorinated Organic Content (RCl); (*g*) PCBs; and (*h*) Total Particulate Matter.

(7) At a minimum monitoring and recording of combustion products and incineration operations shall be conducted for the following parameters whenever the incinerator is incinerating PCBs:

(i) O_2; (ii) CO; and (iii) CO_2. The monitoring for O_2 and CO shall be continuous. The monitoring for CO_2 shall be periodic, at a frequency specified by the Regional Administrator or Director, Exposure Evaluation Division.

(8) The flow of PCBs to the incinerator shall stop automatically when any one or more of the following conditions occur, unless a contingency plan is submitted by the incinerator owner or operator and approved by the Regional Administrator or Director, Exposure Evaluation Division. The contingency plan indicates what alternative measures the incinerator owner or operator would take if any of the following conditions occur:

(i) Failure of monitoring operations specified in paragraph (a)(7) of this section;

(ii) Failure of the PCB rate and quantity measuring and recording equipment specified in paragraph (a)(3) of this section; or

(iii) Excess oxygen falls below the percentage specified in paragraph (a)(1) of this section.

(9) Water scrubbers shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by the appropriate EPA Regional Administrator or the Director, Exposure Evaluation Division. Scrubber effluent shall be monitored and shall comply with applicable effluent or pretreatment standards, and any other State and Federal laws and regulations. An alternate method of HCl control may be used if the alternate method has been approved by the Regional Administrator or the Director, Exposure Evaluation Division. (The HCl neutralizing capability of cement kilns is considered to be an alternate method.)

(b) *Nonliquid PCBs.* An incinerator used for incinerating nonliquid PCBs, PCB Articles, PCB Equipment, or PCB Containers shall be approved by the appropriate EPA Regional Administrator or the Director, Exposure Evaluation Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than one region must be submitted to the Director, Exposure Evaluation Division, except for research and development involving less than 500 pounds of PCB material (see § 761.60(i)(2)). Requests for approval of incinerators to be used in only one region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (b)(1) and (2) of this section unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements that may be prescribed pursuant to paragraph (d)(4) of this section.

(1) The mass air emissions from the incinerator shall be no greater than 0.001g PCB/kg of the PCB introduced into the incinerator.

(2) The incinerator shall comply with the provisions of paragraphs (a)(2), (3), (4), (6), (7), (8)(i) and (ii), and (9) of this section.

(c) *Maintenance of data and records.* All data and records required by this section shall be maintained in accordance with § 761.180, Records and monitoring.

(d) *Approval of incinerators.* Prior to the incineration of PCBs and PCB Items the owner or operator of an incinerator shall receive the written approval of the Agency Regional Administrator for the region in which the incinerator is located, or the Director, Exposure Evaluation Division. Approval from the Director, Exposure Evaluation Division may be effective in all ten EPA regions. Such approval shall be obtained in the following manner:

(1) *Application.* The owner or operator shall submit to the Regional Administrator or the Director, Exposure Evaluation Division an application which contains:

(i) The location of the incinerator;

(ii) A detailed description of the incinerator including general site plans and design drawings of the incinerator;

(iii) Engineering reports or other information on the anticipated performance of the incinerator;

(iv) Sampling and monitoring equipment and facilities available;

(v) Waste volumes expected to be incinerated;

(vi) Any local, State, or Federal permits or approvals; and

(vii) Schedules and plans for complying with the approval requirements of this regulation.

(2) *Trial burn.* (i) Following receipt of the application described in paragraph (d)(1) of this section, the Regional Administrator or the Director, Exposure Evaluation Division shall determine if a trial burn is required and notify the person who submitted the report whether a trial burn of PCBs and PCB Items must be conducted. The Regional Administrator or the Director, Exposure Evaluation Division may require the submission of any other information that the Regional Administrator or the Director, Exposure Evaluation Division finds to be reasonably necessary to determine the need for a trial burn. Such other information shall be restricted to the types of information required in paragraphs (d)(1)(i) through (vii) of this section.

(ii) If the Regional Administrator or the Director, Exposure Evaluation Division determines that a trial burn must be held, the person who submitted the report described in paragraph (d)(1) of this section shall submit to the Regional Administrator or the Director, Exposure Evaluation Division a detailed plan for conducting and monitoring the trial burn. At a minimum, the plan must include:

(A) Date trial burn is to be conducted;

(B) Quantity and type of PCBs and PCB Items to be incinerated;

(C) Parameters to be monitored and location of sampling points;

(D) Sampling frequency and methods and schedules for sample analyses; and

(E) Name, address, and qualifications of persons who will review analytical results and other pertinent data, and who will perform a technical evaluation of the effectiveness of the trial burn.

(iii) Following receipt of the plan described in paragraph (d)(2)(ii) of this section, the Regional Administrator or the Director, Exposure Evaluation Division will approve the plan, require additions or modifications to the plan, or disapprove the plan. If the plan is disapproved, the Regional Administrator or the Director, Exposure Evaluation Division will notify the person who submitted the plan of such disapproval, together with the reasons why it is disapproved. That person may thereafter submit a new plan in accordance with paragraph (d)(2)(ii) of this section. If the plan is approved (with any additions or modifications which the Regional Administrator or the Director, Exposure Evaluation Division may prescribe), the Regional Administrator or the Director, Exposure Evaluation Division will notify the person who submitted the plan of the approval. Thereafter, the trial burn shall take place at a date and time to be agreed upon between the Regional Administrator or the Director, Exposure Evaluation Division and the person who submitted the plan.

(3) *Other information.* In addition to the information contained in the report and plan described in paragraphs (d)(1) and (2) of this section, the Regional Administrator or the Assistant Administrator for Pesticides and Toxic Substances may require the owner or operator to submit any other information that the Regional Administrator or the Assistant Administrator for Pesticides and Toxic Substances finds to be reasonably necessary to determine whether an incinerator shall be approved.

NOTE: The Regional Administrator will have available for review and inspection an Agency manual containing information on sampling methods and analytical procedures for the parameters required in § 761.70(a) (3), (4), (6), and (7) plus any other parameters he/she may determine to be appropriate. Owners or operators are encouraged to review this manual prior to submitting any report required in § 761.70.

(4) *Contents of approval.* (i) Except as provided in paragraph (d)(5) of this section, the Regional Administrator or the Director, Exposure Evaluation Division may not approve an incinerator for the disposal of PCBs and PCB Items unless he finds that the incinerator meets all of the requirements of paragraphs (a) and/or (b) of this section.

(ii) In addition to the requirements of paragraphs (a) and/or (b) of this section, the Regional Administrator or the Director, Exposure Evaluation Division may include in an approval any other requirements that the Regional Administrator or the Director, Exposure Evaluation Division finds are necessary to ensure that operation of the incinerator does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(5) *Waivers.* An owner or operator of the incinerator may submit evidence to the Regional Administrator or the Director, Exposure Evaluation Division that operation of the incinerator will not present an unreasonable risk of injury to health or the enviroment from PCBs, when one or more of the requirements of paragraphs (a) and/or (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator or the Director, Exposure Evaluation Division may in his/her discretion find that any requirement of paragraphs (a) and (b) of this section is not necessary to protect against such a risk, and may waive the requirements in any approval for that incinerator. Any finding and waiver under this paragraph must be stated in writing and included as part of the approval.

(6) *Persons approved.* An approval will designate the persons who own and who are authorized to operate the incinerator, and will apply only to such persons, except as provided in paragraph (d)(8) of this section.

(7) *Final approval.* Approval of an incinerator will be in writing and signed by the Regional Administrator or the Director, Exposure Evaluation Division. The approval will state all requirements applicable to the approved incinerator.

(8) *Transfer of property.* Any person who owns or operates an approved incinerator must notify EPA at least 30 days before transferring ownership in the incinerator or the property it stands upon, or transferring the right to operate the incinerator. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA incinerator approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new incinerator approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 48 FR 13185, Mar. 30, 1983; 49 FR 28191, July 10, 1984; 53 FR 12524, Apr. 15, 1988]

§ 761.75 Chemical waste landfills.

This section applies to facilities used to dispose of PCBs in accordance with the part.

(a) *General.* A chemical waste landfill used for the disposal of PCBs and PCB Items shall be approved by the Agency Regional Administrator pursuant to paragraph (c) of this section. The landfill shall meet all of the requirements specified in paragraph (b) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (c)(4) of this section. In addition, the landfill shall meet any other requirements that may be prescribed pursuant to paragraph (c)(3) of this section.

(b) *Technical requirements.* Requirements for chemical waste landfills used for the disposal of PCBs and PCB Items are as follows:

(1) *Soils.* The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

(i) In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;

(ii) Permeability (cm/sec), equal to or less than 1×10^{-7};

(iii) Percent soil passing No. 200 Sieve, >30;

(iv) Liquid Limit, >30; and

(v) Plasticity Index >15.

(2) *Synthetic membrane liners.* Synthetic membrane liners shall be used when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in paragraph (b)(1) of this section. Whenever a synthetic liner is used at a landfill site, special precautions shall

be taken to insure that its integrity is maintained and that it is chemically compatible with PCBs. Adequate soil underlining and soil cover shall be provided to prevent excessive stress on the liner and to prevent rupture of the liner. The liner must have a minimum thickness of 30 mils.

(3) *Hydrologic conditions.* The bottom of the landfill shall be above the historical high groundwater table as provided below. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection. The bottom of the landfill liner system or natural in-place soil barrier shall be at least fifty feet from the historical high water table.

(4) *Flood protection.* (i) If the landfill site is below the 100-year floodwater elevation, the operator shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.

(ii) If the landfill site is above the 100-year floodwater elevation, the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.

(5) *Topography.* The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.

(6) *Monitoring systems*—(i) *Water sampling.* (A) For all sites receiving PCBs, the ground and surface water from the disposal site area shall be sampled prior to commencing operations under an approval provided in paragraph (c) of this section for use as baseline data.

(B) Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph (c)(3)(ii) of this section shall be sampled at least monthly when the landfill is being used for disposal operations.

(C) Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph (c)(3)(ii) of this section shall be sampled for a time period specified by the Regional Administrator on a frequency of no less than once every six months after final closure of the disposal area.

(ii) *Groundwater monitor wells.* (A) If underlying earth materials are homogenous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation on the property.

(B) All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled with Portland cement or an equivalent material and plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or stormwater runoff. The well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis. The discharge shall be treated to meet applicable State or Federal discharge standards or recycled to the chemical waste landfill.

(iii) *Water analysis.* As a minimum, all samples shall be analyzed for the following parameters, and all data and records of the sampling and analysis shall be maintained as required in § 761.180(d)(1). Sampling methods and analytical procedures for these parameters shall comply with those specified in 40 CFR Part 136 as amended in 41 FR 52779 on December 1, 1976.

(A) PCBs.

(B) pH.

(C) Specific conductance.

(D) Chlorinated organics.

(7) *Leachate collection.* A leachate collection monitoring system shall be installed above the chemical waste landfill. Leachate collection systems shall be monitored monthly for quantity and physicochemical characteristics of leachate produced. The leachate should be either treated to acceptable limits for discharge in accordance

with a State or Federal permit or disposed of by another State or Federally approved method. Water analysis shall be conducted as provided in paragraph (b)(6)(iii) of this section. Acceptable leachate monitoring/collection systems shall be any of the following designs, unless a waiver is obtained pursuant to paragraph (c)(4) of this section.

(i) *Simple leachate collection.* This system consists of a gravity flow drainfield installed above the waste disposal facility liner. This design is recommended for use when semi-solid or leachable solid wastes are placed in a lined pit excavated into a relatively thick, unsaturated, homogenous layer of low permeability soil.

(ii) *Compound leachate collection.* This system consists of a gravity flow drainfield installed above the waste disposal facility liner and above a secondary installed liner. This design is recommended for use when semi-liquid or leachable solid wastes are placed in a lined pit excavated into relatively permeable soil.

(iii) *Suction lysimeters.* This system consists of a network of porous ceramic cups connected by hoses/tubing to a vacuum pump. The porous ceramic cups or suction lysimeters are installed along the sides and under the bottom of the waste disposal facility liner. This type of system works best when nstalled in a relatively permeable unsaturated soil immediately adjacent to he bottom and/or sides of the dispos- l facility.

(8) *Chemical waste landfill operations.* (i) PCBs and PCB Items shall e placed in a landfill in a manner hat will prevent damage to containers r articles. Other wastes placed in the andfill that are not chemically com- atible with PCBs and PCB Items in- luding organic solvents shall be segre- ated from the PCBs throughout the aste handling and disposal process.

(ii) An operation plan shall be devel- ped and submitted to the Regional dministrator for approval as required paragraph (c) of this section. This an shall include detailed explana- ons of the procedures to be used for cordkeeping, surface water handling rocedures, excavation and backfilling, aste segregation burial coordinates, vehicle and equipment movement, use of roadways, leachate collection systems, sampling and monitoring procedures, monitoring wells, environmental emergency contingency plans, and security measures to protect against vandalism and unauthorized waste placements. EPA guidelines entitled "Thermal Processing and Land Disposal of Solid Waste" (39 FR 29337, Aug. 14, 1974) are a useful reference in preparation of this plan. If the facility is to be used to dispose of liquid wastes containing between 50 ppm and 500 ppm PCB, the operations plan must include procedures to determine that liquid PCBs to be disposed of at the landfill do not exceed 500 ppm PCB and measures to prevent the migration of PCBs from the landfill. Bulk liquids not exceeding 500 ppm PCBs may be disposed of provided such waste is pretreated and/or stabilized (e.g., chemically fixed, evaporated, mixed with dry inert absorbant) to reduce its liquid content or increase its solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in a landfill. PCB Container of liquid PCBs with a concentration between 50 and 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert sorbant material capable of absorbing all of the liquid contents of the container.

(iii) Ignitable wastes shall not be disposed of in chemical waste landfills. Liquid ignitable wastes are wastes that have a flash point less than 60 degrees C (140 degrees F) as determined by the following method or an equivalent method: Flash point of liquids shall be determined by a Pensky-Martens Closed Cup Tester, using the protocol specified in ASTM D 93-85, or the Setaflash Closed Tester using the protocol specified in ASTM Standard D-3278-78.

(iv) Records shall be maintained for all PCB disposal operations and shall include information on the PCB concentration in liquid wastes and the three dimensional burial coordinates for PCBs and PCB Items. Additional records shall be developed and maintained as required in § 761.180.

(9) *Supporting facilities.* (i) A six foot woven mesh fence, wall, or similar

device shall be placed around the site to prevent unauthorized persons and animals from entering.

(ii) Roads shall be maintained to and within the site which are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.

(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.

(c) *Approval of chemical waste landfills.* Prior to the disposal of any PCBs and PCB Items in a chemical waste landfill, the owner or operator of the landfill shall receive written approval of the Agency Regional Administrator for the Region in which the landfill is located. The approval shall be obtained in the following manner:

(1) *Initial report.* The owner or operator shall submit to the Regional Administrator an initial report which contains:

(i) The location of the landfill;

(ii) A detailed description of the landfill including general site plans and design drawings;

(iii) An engineering report describing the manner is which the landfill complies with the requirements for chemical waste landfills specified in paragraph (b) of this section;

(iv) Sampling and monitoring equipment and facilities available;

(v) Expected waste volumes of PCBs;

(vi) General description of waste materials other than PCBs that are expected to be disposed of in the landfill;

(vii) Landfill operations plan as required in paragraph (b) of this section;

(viii) Any local, State, or Federal permits or approvals; and

(ix) Any schedules or plans for complying with the approval requirements of these regulations.

(2) *Other information.* In addition to the information contained in the report described in paragraph (c)(1) of this section, the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved. Such other information shall be restricted to the types of information required in paragraphs (c)(1) (i) through (ix) of this section.

(3) *Contents of approval.* (i) Except as provided in paragraph (c)(4) of this section the Regional Administrator may not approve a chemical waste landfill for the disposal of PCBs and PCB Items, unless he finds that the landfill meets all of the requirements of paragraph (b) of this section.

(ii) In addition to the requirements of paragraph (b) of this section, the Regional Administrator may include in an approval any other requirements or provisions that the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs. Such provisions may include a fixed period of time for which the approval is valid. The approval may also include a stipulation that the operator of the chemical waste landfill report to the Regional Administrator any instance when PCBs are detectable during monitoring activities conducted pursuant to paragraph (b)(6) of this section.

(4) *Waivers.* An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the requirements of paragraph (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that one or more of the requirements of paragraph (b) of this section is not necessary to protect against such a risk and may waive the requirements in any approval for that landfill. Any finding and waiver under this paragraph will be stated in writing and included as part of the approval.

(5) *Persons approved.* Any approval will designate the persons who own and who are authorized to operate the chemical waste landfill, and will apply only to such persons, except as provided by paragraph (c)(7) of this section.

(6) *Final approval.* Approval of a chemical waste landfill will be in wri

ing and will be signed by the Regional Administrator. The approval will state all requirements applicable to the approved landfill.

(7) *Transfer of property.* Any person who owns or operates an approved chemical waste landfill must notify EPA at least 30 days before transferring ownership in the property or transferring the right to conduct the chemical waste landfill operation. The transferor must also submit to EPA, at least 30 days before such transfer a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA chemical waste landfill approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new chemical waste landfill approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

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44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 48 FR 5730, Feb. 8, 1983; 49 FR 28191, July 0, 1984; 53 FR 12524, Apr. 15, 1988; 53 FR 1641, June 9, 1988]

§ 761.79 Decontamination.

(a) Any PCB Container to be decon- aminated shall be decontaminated by lushing the internal surfaces of the ontainer three times with a solvent ontaining less than 50 ppm PCB. The olubility of PCBs in the solvent must e five percent or more by weight. Each rinse shall use a volume of the ormal diluent equal to approximately en (10) percent of the PCB Container apacity. The solvent may be reused or decontamination until it contains 0 ppm PCB. The solvent shall then e disposed of as a PCB in accordance ith § 761.60(a). Non-liquid PCBs re- ulting from the decontamination pro- edures shall be disposed of in accord- nce with the provisions of 761.60(a)(4).

(b) Movable equipment used in stor- ge areas shall be decontaminated by vabbing surfaces that have contacted PCBs with a solvent meeting the criteria of paragraph (a) of this section.

NOTE: Precautionary measures should be taken to ensure that the solvent meets safety and health standards as required by applicable Federal regulations.

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982]

Subpart E—Exemptions

§ 761.80 Manufacturing, processing and distribution in commerce exemptions.

(a) The Administrator grants the following petitioner(s) an exemption for 1 year to process and distribute in commerce PCBs for use as a mounting medium in microscopy:

(1) McCrone Accessories & Components, Division of Walter C. McCrone Associates, Inc., 2820 South Michigan Avenue, Chicago, IL 60616.

(2) [Reserved]

(b) The Administrator grants the following petitioners an exemption for 1 year to process and distribute in commerce PCBs for use as a mounting medium in microscopy, an immersion oil in low fluorescence microscopy and an optical liquid:

(1) R.P. Cargille Laboratories, Inc., 55 Commerce Road, Cedar Grove, N.J. 07009.

(2) [Reserved]

(c) The Administrator grants the following petitioner(s) an exemption for 1 year to manufacture PCBs for use in small quantities for research and development:

(1) Accu-Standard, 25 Science Park, New Haven, CT. 06503.

(2) [Reserved]

(d) The Administrator grants the following petitioner(s) an exemption for 1 year to export PCBs for use in small quantities for research and development:

(1) Accu-Standard, New Haven, CT. 06503.

(2) [Reserved]

(e) The Administrator grants the following petitioner an exemption for one year to import (manufacture) into the U.S., small quantities of existing PCB fluids from electrical equipment for analysis:

(1) Unison Transformer Services, Inc., Tarrytown, N.Y. 10591, provided

each of the following conditions are met:

(i) The samples must be shipped in 5.0 mL or less, hermetically sealed vials.

(ii) The exemption is limited to no more than 250 samples per year.

(iii) Unison makes quarterly inspections of its laboratories to ensure that proper safety procedures are being followed.

(iv) Unison annually notifies and describes to EPA its attempts to have samples analyzed abroad.

(2) [Reserved]

(f) The Administrator grants the following petitioner a class exemption to its members for 1 year to process and distribute in commerce non-porous transformer component parts which have been decontaminated of PCB residues and to buy and sell PCB transformers or PCB-contaminated transformers to which only double-rinsed, non-porous component parts have been added.

(1) Electrical Apparatus Service Association, 1331 Baur Boulevard, St. Louis, MO. 63123.

(2) [Reserved]

(g) The 1-year exemption granted to petitioners in paragraphs (a) through (e) of this section shall be renewed automatically so long as the petitioners notify EPA annually of any increase in the amount of PCBs to be processed and distributed, imported (manufactured), or exported or of any change in the manner of processing and distributing, importing (manufacturing), or exporting of PCBs and unless EPA initiates rulemaking to terminate the exemption.

[55 FR 21031, May 22, 1990]

Effective Date Note: At 55 FR 21031, May 22, 1990, § 761.80 was revised, effective July 5, 1990. For the convenience of the user, the superseded text appears as follows:

§ 761.80 Manufacturing, processing, and distribution in commerce exemptions.

(a)—(e) [Reserved]

(f) The Administrator grants the following petitioners an exemption for one year to manufacture small quantities of PCBs for research and development:

(1) California Bionuclear Corp., Sun Valley, CA 91352 (ME-13).

(2) Foxboro Co., North Haven, CT 06473 (ME-6).

(3) ULTRA Scientific, Inc., Hope, RI 02831 (ME-99.1).

(4) Midwest Research Institute, Kansas City, MO 64110 (ME-70.1).

(5) Pathfinder Laboratories, St. Louis, MO 63146 (A division of Sigma Aldridge Corporation, St. Louis, MO, 63178) (ME-76).

(6) Radian Corp., Austin, TX 78766 (ME-81.2).

(7) Wellington Sciences USA, College Station, TX 77840 (ME-104.1).

(g) The Administrator grants a class exemption to all processors and distributors of PCBs in small quantities for research and development provided that the following conditions are met:

(1) All processors and distributors must maintain records of their PCB activities for a period of 5 years.

(2) Any person or company which expects to process or distribute in commerce 100 grams (.22 lb) or more PCBs in 1 year must report to EPA identifying the sites of PCB activities and the quantity of PCBs to be processed or distributed in commerce.

(h)—(l) [Reserved]

(m) The Administrator grants the following petitioners an exemption for one year to process and export small quantities of PCBs for research and development:

(1) Chem Service, Inc., West Chester, PA 19380 (PDE-41).

(2) Foxboro Co., North Haven, CT 06473 (PDE-21.1).

(3) PolyScience Corp., Niles, IL 60648 (PDE-178).

(4) ULTRA Scientific, Inc., Hope, RI 02831 (PDE-282.1).

(5) Supelco, Inc., Bellefonte, PA 16823-0048 (PDE-41.2).

(6) Radian Corp., Austin, TX 78766 (PDE-182.1).

(n) The 1-year exemption granted to petitioners in paragraphs (f), (g), and (m) of this section shall be renewed automatically unless a petitioner notifies EPA of any increase in the amount of PCBs to be manufactured, imported, or exported or any change in the manner of manufacture, import, or export of PCBs. EPA will consider the submission of such information to be a renewed petition for exemption. EPA will evaluate the information in the renewed exemption petition, issue a proposed rule for public comment, and issue either a final rule granting the exemption or a notice denying the exemption. Until EPA acts on the petition, the petitioner will be allowed to continue the activities for which it requests exemption.

(o) The 1-year class exemption granted to all processors and distributors of PCBs in small quantities for research and development in paragraph (g) of this section shall be renewed automatically unless information is submitted affecting EPA's conclusion that the class exemption, or the activities of any individual or company included in the exemption, will not pose an unreasonable risk of injury to health or the environment. EPA will evaluate the information, issue a proposed rule for public comment, and issue a final rule affecting the class exemption or individuals or companies included in the class exemption. Until EPA issues a final rule, individuals and companies included in the class exemption will be allowed to continue processing and distributing PCBs in small quantities for research and development.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[49 FR 28171, July 10, 1984, as amended at 51 FR 28569, Aug. 8, 1986; 53 FR 12524, Apr. 15, 1988]

Subpart F—[Reserved]

Subpart G—PCB Spill Cleanup Policy

SOURCE: 52 FR 10705, Apr. 2, 1987, unless otherwise noted.

§ 761.120 Scope.

(a) *General.* This policy establishes criteria EPA will use to determine the adequacy of the cleanup of spills resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater. The policy applies to spills which occur after May 4, 1987.

(1) Existing spills (spills which occurred prior to May 4, 1987, are excluded from the scope of this policy for two reasons:

(i) For old spills which have already been discovered, this policy is not inended to require additional cleanup where a party has already cleaned a pill in accordance with requirements mposed by EPA through its regional offices, nor is this policy intended to nterfere with ongoing litigation of enorcement actions which bring into ssue PCB spills cleanup.

(ii) EPA recognizes that old spills which are discovered after the effecve date of this policy will require te-by-site evaluation because of the kelihood that the site involves more ervasive PCB contamination than resh spills and because old spills are generally more difficult to clean up han fresh spills (particularly on porous surfaces such as concrete). herefore, spills which occurred before the effective date of this policy are to be decontaminated to requirements established at the discretion of EPA, usually through its regional offices.

(2) EPA expects most PCB spills subject to the TSCA PCB regulations to conform to the typical spill situations considered in developing this policy. This policy does, however, exclude from application of the final numerical cleanup standards certain spill situations from its scope: Spills directly into surface waters, drinking water, sewers, grazing lands, and vegetable gardens. These types of spills are subject to final cleanup standards to be established at the discretion of the regional office. These spills are, however, subject to the immediate notification requirements and measures to minimize further environmental contamination.

(3) For all other spills, EPA generally expects the decontamination standards of this policy to apply. Occasionally, some small percentage of spills covered by this policy may warrant more stringent cleanup requirements because of additional routes of exposure or significantly greater exposures than those assumed in developing the final cleanup standards of this policy. While the EPA regional offices have the authority to require additional cleanup in these circumstances, the Regional Administrator must first make a finding based on the specific facts of a spill that additional cleanup must occur to prevent unreasonable risk. In addition, before a final decision is made to require additional cleanup, the Regional Administrator must notify the Director, Office of Toxic Substances at Headquarters of his/her finding and the basis for the finding.

(4) There may also be exceptional spill situations that requires less stringent cleanup or a different approach to cleanup because of factors associated with the particular spill. These factors may mitigate expected exposures and risks or make cleanup to these requirements impracticable.

(b) *Spills that may require more stringent cleanup levels.* For spills within the scope of this policy, EPA generally retains, under § 761.135, the authority to require additional cleanup upon finding that, despite good faith efforts by the responsible party, the numerical decontamination levels in the policy have not been met. In addition, EPA foresees the possibility of exceptional spill situations in which site-specific risk factors may warrant additional cleanup to more stringent numerical decontamination levels than are required by the policy. In these situations, the Regional Administrator has the authority to require cleanup to levels lower than those included in this policy upon finding that further cleanup must occur to prevent unreasonable risk. The Regional Administrator will consult with the Director, Office of Toxic Substances, prior to making such a finding.

(1) For example, site-specific characteristics, such as short depth to ground water, type of soil, or the presence of a shallow well, may pose exceptionally high potential for ground water contamination by PCBs remaining after cleanup to the standards specified in this policy. Spills that pose such a high degree of potential for ground water contamination have not been excluded from the policy under paragraph (d) of this section because the presence of such potential may not be readily apparent. EPA feels that automatically excluding such spills from the scope of the policy could result in the delay of cleanup—a particularly undesirable outcome if potential ground water contamination is, in fact, a significant concern.

(2) In those situations, the Regional Administrator may require cleanup in addition to that required under § 761.125 (b) and (c). However, the Regional Administrator must first make a finding, based on the specific facts of a spill, that additional cleanup is necessary to prevent unreasonable risk. In addition, before making a final decision on additional cleanup, the Regional Administrator must notify the Director of the Office of Toxic Substances of his finding and the basis for the finding.

(c) *Flexibility to allow less stringent or alternative requirements.* EPA retains the flexibility to allow less stringent or alternative decontamination measures based upon site-specific considerations. EPA will exercise this flexibility if the responsible party demonstrates that cleanup to the numerical decontamination levels is clearly unwarranted because of risk-mitigating factors, that compliance with the procedural requirements or numerical standards in the policy is impracticable at a particular site, or that site-specific characteristics make the costs of cleanup prohibitive. The Regional Administrator will notify the Director of OTS of any decision and the basis for the decision to allow less stringent cleanup. The purpose of this notification is to enable the Director of OTS to ensure consistency of spill cleanup standards under special circumstances across the regions.

(d) *Excluded spills.* (1) Although the spill situations in paragraphs (d)(2)(i) through (vi) of this section are excluded from the automatic application of final decontamination standards under § 761.125 (b) and (c), the general requirements under § 761.125(a) do apply to these spills. In addition, all of these excluded situations require practicable, immediate actions to contain the area of contamination. While these situations may not always require more stringent cleanup measures, the Agency is excluding these scenarios because they will always involve significant factors that may not be adequately addressed by cleanup standards based upon typical spill characteristics.

(2) For the spill situations in paragraphs (d)(2)(i) through (vi) of this section, the responsible party shall decontaminate the spill in accordance with site-specific requirements established by the EPA regional offices.

(i) Spills that result in the direct contamination of surface waters (surface waters include, but are not limited to, "waters of the United States" as defined in Part 122 of this chapter, ponds, lagoons, wetlands, and storage reservoirs).

(ii) Spills that result in the direct contamination of sewers or sewage treatment systems.

(iii) Spills that result in the direct contamination of any private or public drinking water sources or distribution systems.

(iv) Spills which migrate to and contaminate surface waters, sewers, or drinking water supplies before cleanup has been completed in accordance with this policy.

(v) Spills that contaminate animal grazing lands.

(vi) Spills that contaminate vegetable gradens.

(e) *Relationship of policy to other statutes.* (1) This policy does not affect cleanup standards or requirements for the reporting of spills imposed, or to be imposed, under other Federal statutory authorities, including but not limited to, the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA). Where more than one requirement applies, the stricter standard must be met.

(2) The Agency recognizes that the existence of this policy will inevitably result in attempts to apply the standards to situations within the scope of other statutory authorities. However, other statutes require the Agency to consider different or alternative factors in determining appropriate corrective actions. In addition, the types and magnitudes of exposures associated with sites requiring corrective action under other statutes often involve important differences from those expected of the typical, electrical equipment-type spills considered in developing this policy. Thus, cleanups under other statutes, such as RCRA corrective actions or remedial and response actions under SARA may result in different outcomes.

§ 761.123 Definitions.

For purposes of this policy, certain words and phrases are used to denote specific materials, procedures, or circumstances. The following definitions are provided for purposes of clarity and are not to be taken as exhaustive ists of situations and materials covered by the policy.

"Double wash/rinse" means a minimum requirement to cleanse solid surfaces (both impervious and nonimpervious) two times with an appropriate solvent or other material in which PCBs are at least 5 percent soluble (by weight). A volume of PCB-free fluid sufficient to cover the contaminated surface completely must be used in each wash/rinse. The wash/rinse requirement does not mean the mere spreading of solvent or other fluid over the surface, nor does the requirement mean a once-over wipe with a soaked cloth. Precautions must be taken to contain any runoff resulting from the cleansing and to dispose properly of wastes generated during the cleansing.

"High-concentration PCBs" means PCBs that contain 500 ppm or greater PCBs, or those materials which EPA requires to be assumed to contain 500 ppm or greater PCBs in the absence of testing.

"High-contact industrial surface" means a surface in an industrial setting which is repeatedly touched, often for relatively long periods of time. Manned machinery and control panels are examples of high-contact industrial surfaces. High-contact industrial surfaces are generally of impervious solid material. Examples of low-contact industrial surfaces include ceilings, walls, floors, roofs, roadways and sidewalks in the industrial area, utility poles, unmanned machinery, concrete pads beneath electrical equipment, curbing, exterior structural building components, indoor vaults, and pipes.

"High-contact residential/commercial surface" means a surface in a residential/commercial area which is repeatedly touched, often for relatively long periods of time. Doors, wall areas below 6 feet in height, uncovered flooring, windowsills, fencing, bannisters, stairs, automobiles, and children's play areas such as outdoor patios and sidewalks are examples of high-contact residential/commercial surfaces. Examples of low-contact residential/commercial surfaces include interior ceilings, interior wall areas above 6 feet in height, roofs, asphalt roadways, concrete roadways, wooden utility poles, unmanned machinery, concrete pads beneath electrical equipment, curbing, exterior structural building components (e.g., aluminum/

vinyl siding, cinder block, asphalt tiles), and pipes.

"Impervious solid surfaces" means solid surfaces which are nonporous and thus unlikely to absorb spilled PCBs within the short period of time required for cleanup of spills under this policy. Impervious solid surfaces include, but are not limited to, metals, glass, aluminum siding, and enameled or laminated surfaces.

"Low-concentration PCBs" means PCBs that are tested and found to contain less than 500 ppm PCBs, or those PCB-containing materials which EPA requires to be assumed to be at concentrations below 500 ppm (i.e., untested mineral oil dielectric fluid).

"Nonimpervious solid surfaces" means solid surfaces which are porous and are more likely to absorb spilled PCBs prior to completion of the cleanup requirements prescribed in this policy. Nonimpervious solid surfaces include, but are not limited to, wood, concrete, asphalt, and plasterboard.

"Nonrestricted access areas" means any area other than restricted access, outdoor electrical substations, and other restricted access locations, as defined in this section. In addition to residential/commercial areas, these areas include unrestricted access rural areas (areas of low density development and population where access is uncontrolled by either man-made barriers or naturally occurring barriers, such as rough terrain, mountains, or cliffs).

"Other restricted access (nonsubstation) locations" means areas other than electrical substations that are at least 0.1 kilometer (km) from a residential/commercial area and limited by man-made barriers (e.g., fences and walls) to substantially limited by naturally occurring barriers such as mountains, cliffs, or rough terrain. These areas generally include industrial facilities and extremely remote rural locations. (Areas where access is restricted but are less than 0.1 km from a residential/commercial area are considered to be residential/commercial areas.)

"Outdoor electrical substations" means outdoor, fenced-off, and restricted access areas used in the transmission and/or distribution of electrical power Outdoor electrical substations restrict public access by being fenced or walled off as defined under § 761.30(l)(1)(ii). For purposes of this TSCA policy, outdoor electrical substations are defined as being located at least 0.1 km from a residential/commercial area. Outdoor fenced-off and restricted access areas used in the transmission and/or distribution of electrical power which are located less than 0.1. km from a residential/commercial area are considered to be residential/commercial areas.

"PCBs" means polychlorinated biphenyls as defined under § 761.3. As specified under § 761.1(b), no requirements may be avoided through dilution of the PCB concentration.

"Requirements and standards" means:

(1) "Requirements" as used in this policy refers to both the procedural responses and numerical decontamination levels set forth in this policy as constituting adequate cleanup of PCBs.

(2) "Standards" refers to the numerical decontamination levels set forth in this policy.

"Residential/commercial areas" means those areas where people live or reside, or where people work in other than manufacturing or farming industries. Residential areas include housing and the property on which housing is located, as well as playgrounds, roadways, sidewalks, parks, and other similar areas within a residential community. Commercial areas are typically accessible to both members of the general public and employees and include public assembly properties, institutional properties, stores, office buildings, and transportation centers.

"Responsible party means the owner of the PCB equipment, facility, or other source of PCBs or his/her designated agent (e.g., a facility manager or foreman).

"Soil" means all vegetation, soils and other ground media, including but not limited to, sand, grass , gravel, and oyster shells. It does not include concrete and asphalt.

"Spill" means both intentional and unintentional spills, leaks, and other uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases. This policy applies to spills of 50 ppm or greater PCBs. The concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the PCBs were spilled. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm, but less than 500 ppm PCBs and is subject to the relevant requirements of this policy.

"Spill area" means the area of soil on which visible traces of the spill can be observed plus a buffer zone of 1 foot beyond the visible traces. Any surface or object (e.g., concrete sidewalk or automobile) within the visible traces area or on which visible traces of the spilled material are observed is included in the spill area. This area represents the minimum area assumed to be contaminated by PCBs in the absence of precleanup sampling data and is thus the minimum area which must be cleaned.

"Spill boundaries" means the actual area of contamination as determined by postcleanup verification sampling or by precleanup sampling to determine actual spill boundaries. EPA can require additional cleanup when necessary to decontaminate all areas within the spill boundaries to the levels required in this policy (e.g., additional cleanup will be required if postcleanup sampling indicates that the area decontaminated by the responsible party, such as the spill area as defined in this section, did not encompass the actual boundaries of PCB contamination).

"Standard wipe test" means, for spills of high-concentration PCBs on solid surfaces, a cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol. A standard-size template (10 centimeters (cm) x 10 cm) will be used to delineate the area of cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Further, EPA requires the collection and testing of field blanks and replicates.

[52 FR 10705, Apr. 2, 1987; 52 FR 23397, June 19, 1987]

§ 761.125 Requirements for PCB spill cleanup.

(a) *General.* Unless expressly limited, the reporting, disposal, and precleanup sampling requirements in paragraphs (a) (1) through (3) of this section apply to all spills of PCBs at concentrations of 50 ppm or greater which are subject to decontamination requirements under TSCA, including those spills listed under § 761.120(b) which are excluded from the cleanup standards at paragraphs (b) and (c) of this section.

(1) *Reporting requirements.* The reporting in paragraphs (a)(1) (i) through (iv) of this section is required in addition to applicable reporting requirements under the Clean Water Act (CWA) or the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). For example, under the National Contingency Plan all spills involving 10 pounds or more by weight of PCBs must currently be reported to the National Response Center (1-800-424-8802). The requirements in paragraphs (a)(1) (i) through (iv) of this section are designed to be consistent with existing reporting requirements to the extent possible so as to minimize reporting burdens on governments as well as the regulated community.

(i) Where a spill directly contaminates surface water, sewers, or drinking water supplies, as discussed under § 761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Pesticides and Toxic Substances Branch) and obtain guidance for appropriate cleanup measures in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(ii) Where a spill directly contaminates grazing lands or vegetable gardens, as discussed under § 761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Pesticides and Toxic Substances Branch) and proceed with the immediate requirements specified under paragraph (b) or (c) of this section, depending on the source of the spill, in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(iii) Where a spill exceeds 10 pounds of PCBs by weight and is not addressed in paragraph (a)(1) (i) or (ii) of this section, the responsible party will notify the appropriate EPA regional office (Pesticides and Toxic Substances Branch) and proceed to decontaminate the spill area in accordance with this TSCA policy in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(iv) Spills of 10 pounds or less, which are not addressed in paragraph (a)(1) (i) or (ii) of this section, must be cleaned up in accordance with this policy (in order to avoid EPA enforcement liability), but notification of EPA is not required.

(2) *Disposal of cleanup debris and materials.* All concentrated soils, solvents, rags, and other materials resulting from the cleanup of PCBs under this policy shall be properly stored, labeled, and disposed of in accordance with the provisions of § 761.60.

(3) *Determination of spill boundaries in the absence of visible traces.* For spills where there are insufficient visible traces yet there is evidence of a leak or spill, the boundaries of the spill are to be determined by using a statistically based sampling scheme.

(b) *Requirements for cleanup of low-concentration spills which involve less than 1 pound of PCBs by weight (less than 270 gallons of untested mineral oil)*—(1) *Decontamination requirements.* Spills of less than 270 gallons of untested mineral oil, low-concentration PCBs, as defined under § 761.123, which involve less than 1 pound of PCBs by weight (e.g., less than 270 gallons of untested mineral oil containing less than 500 ppm PCBs) shall be cleaned in the following manner:

(i) Solid surfaces must be double washed/rinsed (as defined under § 761.123); except that all indoor, residential surfaces other than vault areas must be cleaned to 10 micrograms per 100 square centimeters (10 $\mu g/100\ cm^2$ by standard commercial wipe tests.

(ii) All soil within the spill area (i.e. visible traces of soil and a buffer of 1 lateral foot around the visible traces must be excavated, and the ground be restored to its original configuration by back-filling with clean soil (i.e., containing less than 1 ppm PCBs).

(iii) Requirements of paragraphs (b)(1) (i) and (ii) of this section must be completed within 48 hours after the responsible party was notified or became aware of the spill.

(2) *Effect of emergency or adverse weather.* Completion of cleanup may be delayed beyond 48 hours in case of circumstances including but not limited to, civil emergency, adverse weather conditions, lack of access to the site and emergency operating conditions. The occurrence of a spill on a weekend or overtime costs are not acceptable reasons to delay response. Completion of cleanup may be delayed only for the duration of the adverse conditions. If the adverse weather conditions, or time lapse due to other emergency has left insufficient visible traces, the responsible party must use a statistically based sampling scheme to determine the spill boundaries as required under paragraph (a)(3) of this section.

(3) *Records and certification.* At the completion of cleanup, the responsible party shall document the cleanup with records and certification of decontamination. The records and certification must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill (e.g., type of equipment).

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces, and a brief description of the sampling methodology used to establish the spill boundaries

(vi) A brief description of the solid surfaces cleaned and of the double wash/rinse method used.

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) A certification statement signed by the responsible party stating that the cleanup requirements have been met and that the information contained in the record is true to the best of his/her knowledge.

(ix) While not required for compliance with this policy, the following information would be useful if maintained in the records:

(A) Additional pre- or post-cleanup sampling.

(B) The estimated cost of the cleanup by man-hours, dollars, or both.

(c) *Requirements for cleanup of high-concentration spills and low-concentration spills involving 1 pound or nore PCBs by weight (270 gallons or nore of untested mineral oil).* Cleanup of low-concentration spills involving 1 b or more PCBs by weight and of all spills of materials other than low-concentration materials shall be considered complete if all of the immediate requirements, cleanup standards, sampling, and recordkeeping requirements of paragraphs (c) (1) through (5) of his section are met.

(1) *Immediate requirements.* The our actions in paragraphs (c)(1) (i) hrough (iv) of this section must be aken as quickly as possible and within io more than 24 hours (or within 48 iours for PCB Transformers) after he responsible party was notified or ecame aware of the spill, except that ctions described in paragraphs (c)(1) ii) through (iv) of this section can be lelayed beyond 24 hours if circumstances (e.g., civil emergency, hurricane, tornado, or other similar adverse veather conditions, lack of access due o physical impossibility, or emergency perating conditions) so require for he duration of the adverse conditions. 'he occurrence of a spill on a weekend r overtime costs are not acceptable easons to delay response. Owners of pilled PCBs who have delayed cleanup because of these types of circumstances must keep records documenting the fact that circumstances precluded rapid response.

(i) The responsible party shall notify the EPA regional office and the NRC as required by § 761.125(a)(1) or by other applicable statutes.

(ii) The responsible party shall effectively cordon off or otherwise delineate and restrict an area encompassing any visible traces plus a 3-foot buffer and place clearly visible signs advising persons to avoid the area to minimize the spread of contamination as well as the potential for human exposure.

(iii) The responsible party shall record and document the area of visible contamination, noting the extent of the visible trace areas and the center of the visible trace area. If there are no visible traces, the responsible party shall record this fact and contact the regional office of the EPA for guidance in completing statistical sampling of the spill area to establish spill boundaries.

(iv) The responsible party shall initiate cleanup of all visible traces of the fluid on hard surfaces and initiate removal of all visible traces of the spill on soil and other media, such as gravel, sand, oyster shells, etc.

(v) If there has been a delay in reaching the site and there are insufficient visible traces of PCBs remaining at the spill site, the responsible party must estimate (based on the amount of material missing from the equipment or container) the area of the spill and immediately cordon off the area of suspect contaimination. The responsible party must then utilize a statistically based sampling scheme to identify the boundaries of the spill area as soon as practicable.

(vi) Although this policy requires certain immediate actions, as described in paragraphs (c)(1)(i) through (iv) of this section, EPA is not placing a time limit on completion of the cleanup effort since the time required for completion will vary from case to case. However, EPA expects that decontamination will be achieved promptly in all cases and will consider promptness of completion in determining whether the responsible party made good faith efforts to clean up in accordance with this policy.

(2) *Requirements for decontaminating spills in outdoor electrical substations.* Spills which occur in outdoor electrical substations, as defined under § 761.123, shall be decontaminated in accordance with paragraphs (c)(2)(i) and (ii) of this section. Conformance to the cleanup standards under paragraphs (c)(2)(i) and (ii) of this section shall be verified by post-cleanup sampling as specified under § 761.130. At such times as outdoor electrical substations are converted to another use, the spill site shall be cleaned up to the nonrestricted access requirements under paragraph (c)(4) of this section.

(i) Contaminated solid surfaces (both impervious and non-impervious) shall be cleaned to a PCB concentration of 100 micrograms (μg)/100 square centimeters (cm^2) (as measured by standard wipe tests).

(ii) At the option of the responsible party, soil contaminated by the spill will be cleaned either to 25 ppm PCBs by weight, or to 50 ppm PCBs by weight provided that a label or notice is visibly placed in the area. Upon demonstration by the responsible party that cleanup to 25 ppm or 50 ppm will jeopardize the integrity of the electrical equipment at the substation, the EPA regional office may establish an alternative cleanup method or level and place the responsible party on a reasonably timely schedule for completion of cleanup.

(3) *Requirements for decontaminating spills in other restricted access areas.* Spills which occur in restricted access locations other than outdoor electrical substations, as defined under § 761.123, shall be decontaminated in accordance with paragraphs (c)(3), (i) through (v) of this section. Conformance to the cleanup standards in paragraphs (c)(3) (i) through (v) of this section shall be verified by post-cleanup sampling as specified under § 761.130. At such times as restricted access areas other than outdoor electrical substations are converted to another use, the spill site shall be cleaned up to the nonrestricted access area requirements of paragraph (c)(4) of this section.

(i) High-contact solid surfaces, as defined under § 761.163 shall be cleaned to 10 μg/100 cm^2 (as measured by standard wipe tests).

(ii) Low-contact, indoor, impervious solid surfaces will be decontaminated to 10 μg/100 cm^2.

(iii) At the option of the responsible party, low-contact, indoor, nonimpervious surfaces will be cleaned either to 10 μg/100 cm^2 or to 100 μg/100 cm^2 and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associated with that option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(iv) Low-contact, outdoor surfaces (both impervious and nonimpervious) shall be cleaned to 100 μg/100 cm^2.

(v) Soil contaminated by the spill will be cleaned to 25 ppm PCBs by weight.

(4) *Requirements for decontaminating spills in nonrestricted access areas.* Spills which occur in nonrestricted access locations, as defined under § 761.123, shall be decontaminated in accordance with paragraphs (c)(4)(i) through (v) of this section. Conformance to the cleanup standards at paragraphs (c)(4)(i) through (v) of this section shall be verified by post-cleanup sampling as specified under § 761.130.

(i) Furnishings, toys, and other easily replaceable household items shall be disposed of in accordance with the provisions of § 761.60 and replaced by the responsible party.

(ii) Indoor solid surfaces and high-contact outdoor solid surfaces, defined as high contact residential/commercial surfaces under § 761.123, shall be cleaned to 10 μg/100 cm^2 (as measured by standard wipe tests).

(iii) Indoor vault areas and low-contact, outdoor, impervious solid surfaces shall be decontaminated to 10 μg/100 cm^2.

(iv) At the option of the responsible party, low-contact, outdoor, nonimpervious solid surfaces shall be either cleaned to 10 $\mu g/100\ cm^2$ or cleaned to 100 $\mu g/100\ cm^2$ and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associated with that option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(v) Soil contaminated by the spill will be decontaminated to 10 ppm PCBs by weight provided that soil is excavated to a minimum depth of 10 inches. The excavated soil will be replaced with clean soil, i.e., containing less than 1 ppm PCBs, and the spill site will be restored (e.g., replacement of turf).

(5) *Records.* The responsible party shall document the cleanup with records of decontamination. The records must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill, e.g., type of equipment.

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location and the nature of the materials contaminated. This information should include whether the spill occurred in an outdoor electrical substation, other restricted access location, or in a nonrestricted access area.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces and a brief description of the sampling methodology used to establish the spill boundaries.

(vi) A brief description of the solid surfaces cleaned.

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) Postcleanup verification sampling data and, if not otherwise apparent from the documentation, a brief description of the sampling methodology and analytical technique used.

(ix) While not required for compliance with this policy, information on the estimated cost of cleanup (by manhours, dollars, or both) would be useful if maintained in the records.

[52 FR 10705, Apr. 2, 1987, as amended at 53 FR 40884, Oct. 19, 1988]

§761.130 Sampling requirements.

Postcleanup sampling is required to verify the level of cleanup under §761.125(c) (2) through (4). The responsible party may use any statistically valid, reproducible, sampling scheme (either random samples or grid samples) provided that the requirements of paragraphs (a) and (b) of this section are satisfied.

(a) The sampling area is the greater of (1) an area equal to the area cleaned plus an additional 1-foot boundary, or (2) an area 20 percent larger than the original area of contamination.

(b) The sampling scheme must ensure 95 percent confidence against false positives.

(c) The number of samples must be sufficient to ensure that areas of contamination of a radius of 2 feet or more within the sampling area will be detected, except that the minimum number of samples is 3 and the maximum number of samples is 40.

(d) The sampling scheme must include calculation for expected variability due to analytical error.

(e) EPA recommends the use of a sampling scheme developed by the Midwest Research Institute (MRI) for use in EPA enforcement inspections: "Verification of PCB Spill Cleanup by Sampling and Analysis." Guidance for the use of this sampling scheme is available in the MRI report "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup." Both the MRI sampling scheme and the guidance document are available from the TSCA Assistance Office, Environmental Protection Agency, Rm. E-543, 401 M St. SW., Washington, DC 20460 (202-554-1404). The major advantage of this sampling scheme is that it is designed to characterize the degree of contamination within the entire sampling area with a high degree of confidence while using fewer samples than any other grid or random sampling scheme. This sampling scheme also allows some sites to be characterized on the basis of composite samples.

(f) EPA may, at its discretion, take samples from any spill site. If EPA's sampling indicates that the remaining concentration level exceeds the required level, EPA will require further cleanup. For this purpose, the numerical level of cleanup required for spills cleaned in accordance with § 761.125(b) is deemed to be the equivalent of numerical cleanup requirements required for cleanups under § 761.125(c)(2) through (4). Using its best engineering judgment, EPA may sample a statistically valid random or grid sampling technique, or both. When using engineering judgment or random "grab" samples, EPA will take into account that there are limits on the power of a grab sample to dispute statistically based sampling of the type required of the responsible party. EPA headquarters will provide guidance to the EPA regions on the degree of certainty associated with various grab sample results.

§ 761.135 Effect of compliance with this policy and enforcement.

(a) Although a spill of material containing 50 ppm or greater PCBs is considered improper PCB disposal, this policy establishes requirements that EPA considers to be adequate cleanup of the spilled PCBs. Cleanup in accordance with this policy means compliance with the procedural as well as the numerical requirements of this policy. Compliance with this policy creates a presumption against both enforcement action for penalties and the need for further cleanup under TSCA. The Agency reserves the right, however, to initiate appropriate action to compel cleanup where, upon review of the records of cleanup or EPA sampling following cleanup, EPA finds that the decontamination levels in the policy have not been achieved. The Agency also reserves the right to seek penalties where the Agency believes that the responsible party has not made a good faith effort to comply with all provisions of this policy, such as prompt notification of EPA of a spill, recordkeeping, etc.

(b) EPA's exercise of enforcement discretion does not preclude enforcement action under other provisions of TSCA or any other Federal statute. This includes, even in cases where the numerical decontamination levels set forth in this policy have been met, civil or criminal action for penalties where EPA believes the spill to have been the result of gross negligence or knowing violation.

Subparts H and I—[Reserved]

Subpart J—General Records and Reports

§ 761.180 Records and monitoring.

This section contains recordkeeping and reporting requirements that apply to PCBs, PCB Items, and PCB storage and disposal facilities that are subject to the requirements of the part.

(a) *PCBs and PCB Items in service or projected for disposal.* Beginning February 5, 1990, each owner or operator of a facility, other than a commercial storer or a disposer of PCB waste, using or storing at any one time at least 45 kilograms (99.4 pounds) of PCBs contained in PCB Container(s), or one or more PCB Transformers, or 50 or more PCB Large High or Low Voltage Capacitors shall develop and maintain at the facility, or a central facility provided they are maintained at that facility, all annual records and the written annual document log of the disposition of PCBs and PCB Items. The written annual document log must be prepared for each facility by July 1 covering the previous calendar year (January through December). The annual document log shall be maintained for at least 3 years after the facility ceases using or storing PCBs and PCB Items in the quantities prescribed in this paragraph. Annual records (manifests and certificates of disposal) shall be maintained for the same period. The annual records and the annual document log shall be available for inspection at the facility where they are maintained by authorized representatives of EPA during normal business hours, and each owner or operator of a facility subject to these requirements shall know the location of these records. All records and annual documents required to be prepared and maintained by this section prior to February 5, 1990 shall continue to be maintained at the facility for the same time as the annual records and the annual document log. The annual document required for 1989 shall cover the period from January 1, 1989 to February 5, 1990.

(1) The annual records shall include the following:

(i) All signed manifests generated by the facility during the calendar year.

(ii) All Certificates of Disposal that have been received by the facility during the calendar year.

(2) The written annual document log shall include the following:

(i) The name, address, and EPA identification number of the facility covered by the annual document log and the calendar year covered by the annual document log.

(ii) The unique manifest number of every manifest generated by the facility during the calendar year, and from each manifest and for unmanifested waste that may be stored at the facility, the following information:

(A) For bulk PCB waste (*e.g.*, in a tanker or truck), its weight in kilograms, the first date it was removed from service for disposal, the date it was placed into transport for off-site storage or disposal, and the date of disposal, if known.

(B) The serial number (if available) or other means of identifying each PCB Article (*e.g.*, transformer or capacitor), the weight in kilograms of the PCB waste in each transformer or capacitor, the date it was removed from service for disposal, the date it was placed in transport for off-site storage or disposal, and the date of disposal, if known.

(C) A unique number identifying each PCB Container, a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the material in kilograms in each PCB Container, the first date material placed in each PCB Container was removed from service for disposal, and the date each PCB Container was placed in transport for off-site storage or disposal, and the date of disposal (if known).

(D) A unique number identifying each PCB Article Container, a description of the contents of each PCB Article Container, such as pipes, capacitors, electric motors, pumps, etc., including the total weight in kilograms of the content of each PCB Article Container, the first date a PCB Article placed in each PCB Article Container was removed from service for disposal, and the date the PCB Article Container was placed in transport for off-site storage or disposal, and the date of disposal (if known.)

(iii) The total number by specific type of PCB Articles and the total weight in kilograms of PCBs in PCB Articles, the total number of PCB Article Containers and total weight in kilograms of the contents of PCB Article Containers, the total number of PCB Containers and the total weight in kilograms of the contents of PCB Containers, and the total weight in kilograms of bulk PCB waste that was placed into storage for disposal or disposed during the calendar year.

(iv) The total number of PCB Transformers and total weight in kilograms of PCBs contained in the transformers remaining in service at the end of the calendar year.

(v) The total number of Large High or Low Voltage PCB Capacitors remaining in service at the end of the calendar year.

(vi) The total weight in kilograms of any PCBs and PCB Items in PCB Containers, including the identification of container contents, remaining in service at the facility at the end of the calendar year.

(vii) For any PCBs or PCB item received from or shipped to another facility owned or operated by the same generator, the information required under paragraph (a)(2)(ii)(A) through (a)(2)(ii)(D) of this section.

(viii) A record of each telephone call, or other means of verification agreed upon by both parties, made to each designated commercial storer or designated disposer to confirm receipt of PCB waste transported by an independent transporter, as required by § 761.208.

(b) *Disposers and commercial storers of PCB waste.* Beginning February 5, 1990, each owner or operator of a facility (including high efficiency boiler operations) used for the commercial storage or disposal of PCBs and PCB Items shall maintain annual records on the disposition of all PCBs and PCB items at the facility and prepare and maintain a written annual document log that includes the information required by paragraphs (b)(2) of this section for PCBs and PCB Items that were handled as PCB waste at the facility. The written annual document log shall be prepared by July 1 for the previous calendar year (January through December). The written annual document log shall be maintained at each facility for at least 3 years after the facility is no longer used for the storage or disposal of PCBs and PCB Items except that, in the case of chemical waste landfills, the annual document log shall be maintained at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs and PCB Items. The annual records shall be maintained for the same period. The annual records and written annual document log shall be available at the facility for inspection by authorized representatives of the EPA. All records and annual documents required to be prepared and maintained by this section prior to February 5, 1990 shall continue to be maintained at the facility for the same time as the annual records and the annual document log. The annual document for 1989 shall cover the period from January 1, 1989 to February 5, 1990. From the written annual document log the owner or operator of a facility must prepare the annual report containing the information required by paragraphs (b)(3)(i) through (b)(3)(vi) of this section for PCBs and PCB Items that were handled as PCB waste at the facility during the previous calendar year (January through December). The annual report must be submitted by July 15 of each year for the preceding calendar year. If the facility ceases commercial PCB storage or disposal operations, the owner or operator of the facility shall provide at least 60 days advance written notice to the Regional Administrator for the region in which the facility is located of the date the facility intends to begin closure.

(1) The annual records shall include the following:

(i) All signed manifests generated or received at the facility during the calendar year.

(ii) All Certificates of Disposal that have been generated or received by the facility during the calendar year.

(2) The written annual document log shall include the following:

(i) The name, address, and EPA identification number of the storage or disposal facility covered by the annual document log and the calendar year covered by the annual document log.

(ii) For each manifest generated or received by the facility during the calendar year, the unique manifest number and the name and address of the facility that generated the manifest and the following information:

(A) For bulk PCB waste (*e.g.*, in a tanker or truck), its weight in kilograms, the first date PCB waste placed in the tanker or truck was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal, (if known).

(B) The serial number or other means of identifying each PCB Article, not in a PCB Container or PCB Article Container, the weight in kilograms of the PCB waste in the PCB Article, the date it was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal (if known).

(C) The unique number assigned by the generator identifying each PCB Container, a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the PCB waste in kilograms in each PCB Container, the first date PCB waste placed in each PCB Container was removed from service for disposal, the date it was received at the facility, the date each PCB Container was placed in transport for off-site storage or dispos s applicable), and the date the Container was disposed of (if wn).

) The unique number assigned by generator identifying each PCB le Container, a description of the nts of each PCB Article Contain- uch as pipes, capacitors, electric rs, pumps, etc., including the weight in kilograms of the PCB e in each PCB Article Container, irst date a PCB Article placed in PCB Article Container was re- d from service for disposal, the it was received at the facility, the each PCB Article Container was d in transport for off-site storage isposal (as applicable), and the the PCB Article Container was sed of (if known).

Disposers of PCB waste shall in- the confirmed date of disposal tems in paragraphs (b)(2)(ii)(A) gh (b)(2)(ii)(D) of this section.

For any PCB waste disposed at a y that generated the PCB waste y PCB waste that was not mani- l to the facility, the information red under paragraph (b)(2)(ii)(A) gh (b)(2)(ii)(E) of this section.

The owner or operator of a PCB sal or commercial storage facility submit an annual report, which y summarizes the records and l document log required to be ained and prepared under para- s (b)(1) and (b)(2) of this section, e Regional Administrator of the region in which the facility is lo- by July 15 of each year, begin- with July 15, 1991. The first l report submitted on July 15, shall be for the period starting ary 5, 1990 and ending Decem- , 1990. The annual report shall n no confidential business infor- n. The annual report shall con- the information listed in para- s (b)(3)(i) through (b)(3)(vi) of ction.

The name, address, and EPA fication number of the facility d by the annual report for the lar year.

A list of the numbers of all manifests of PCB waste initiat- received by the facility during ear.

(iii) The total weight in kilograms of bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.

(iv) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.

(v) The total weight in kilograms of each of the following PCB categories: bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers remaining in storage for disposal at the facility at the end of the calendar year.

(vi) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers remaining in storage for disposal at the facility at the end of the calendar year.

(vii) The requirement to submit annual reports to the Regional Administrator continues until the submission of the annual report for the calendar year during which the facility ceases PCB storage or disposal operations. Storage operations have not ceased until all PCB waste, including any PCB waste generated during closure, has been removed from the facility.

(4) Whenever a commercial storer of PCB waste accepts PCBs or PCB Items at his storage facility and transfers the PCB waste off-site to another facility for storage or disposal, the

commercial storer of PCB waste shall initiate a manifest under subpart K of this part for the transfer of PCBs or PCB Items to the next storage or disposal facility.

NOTE: Any requirements for weights in kilograms of PCBs may be calculated values if the internal volume of PCBs in containers and transformers is known and included in the reports, together with any assumptions on the density of the PCBs contained in the containers or tranformers. If the internal volume of PCBs is not known, a best estimate may be used.

(c) *Incineration facilities.* Each owner or operator of a PCB incinerator facility shall collect and maintain for a period of 5 years from the date of collection the following information, in addition to the information required in paragraph (b) of this section:

(1) When PCBs are being incinerated, the following continuous and short-interval data:

(i) Rate and quantity of PCBs fed to the combustion system as required in § 761.70(a)(3);

(ii) Temperature of the combustion process as required in § 761.70(a)(4); and

(iii) Stack emission product to include O_2, CO, and CO_2 as required in § 761.70(a)(7).

(2) When PCBs are being incinerated, data and records on the monitoring of stack emissions as required in § 761.70(a)(6).

(3) Total weight in kilograms of any solid residues generated by the incineration of PCBs and PCB Items during the calendar year, the total weight in kilograms of any solid residues disposed of by the facility in chemical waste landfills, and the total weight in kilograms of any solid residues remaining on the facility site.

(4) When PCBs and PCB Items are being incinerated, additional periodic data shall be collected and maintained as specified by the Regional Administrator pursuant to § 761.70(d)(4).

(5) Upon any suspension of the operation of any incinerator pursuant to § 761.70(a)(8), the owner or operator of such an incinerator shall prepare a document. The document shall, at a minimum, include the date and time of the suspension and an explanation of the circumstances causing the suspension of operation. The documen shall be sent to the appropriate Re gional Administrator within 30 days o any such suspension.

(d) *Chemical waste landfill faciliti* Each owner or operator of a PC chemical waste landfill facility sha collect and maintain until at least years after the chemical waste landf is no longer used for the disposal o PCBs the following information in ad dition to the information required i paragraph (b) of this section:

(1) Any water analysis obtained i compliance with § 761.75(b)(6)(iii); an

(2) Any operations records includin burial coordinates of wastes obtaine in compliance with § 761.75(b)(8)(ii).

(e) *High efficiency boiler faciliti* Each owner or operator of a high eff ciency boiler used for the disposal o liquids between 50 and 500 ppm PC shall collect and maintain for a perio of 5 years the following informatio in addition to the information re quired in paragraph (b) of this sectio

(1) For each month PCBs are burne in the boiler the carbon monoxide an excess oxygen data required i § 761.60(a)(2)(iii)(A)(*8*) an § 761.60(a)(3)(iii)(A)(*8*);

(2) The quantity of PCBs burne each month as required i § 761.60(a)(2)(iii)(A)(*7*) an § 761.60(a)(3)(iii)(A)(*7*); and

(3) For each month PCBs (othe than mineral oil dielectric fluid) a burned, chemical analysis data of th waste as required in § 761.60(a)((iii)(B)(*6*).

(f) *Retention of special records b storage and disposal facilities.* In add tion to the information required to b maintained under paragraphs (b), (c (d) and (e) of this section, each owne or operator of a PCB storage or dispo al facility (including high efficien boiler operations) shall collect an maintain for the time period specifie in paragraph (b) of this section th following data:

(1) All documents, corresponden and data that have been provided t the owner or operator of the facili by any State or local governme agency and that pertain to the stora or disposal of PCBs and PCB Items a the facility.

(2) All documents, correspondence, ıd data that have been provided by e owner or operator of the facility any State or local government ency and that pertain to the storage disposal of PCBs and PCB Items at e facility.

3) Any applications and related correspondence sent by the owner or opator of the facility to any local, ate, or Federal authorities in regard waste water discharge permits, solid ste permits, building permits, or her permits or authorizations such those required by §§ 761.70(d) and 1.75(c).

pproved by the Office of Management 1 Budget under control numbers 2070-31 and 2070-0112)

c. 6, Pub. L. 94-469, 90 Stat. 2020 (15 .C. 2605)

FR 31542, May 31, 1979. Redesignated at FR 19527, May 6, 1982, and further reignated at 47 FR 37360, Aug. 25, 1982; 49 28191, July 10, 1984; 53 FR 12524, Apr. 1988; 54 FR 52750, Dec. 21, 1989; 55 FR 05, June 27, 1990]

61.185 Certification program and retention of records by importers and persons generating PCBs in excluded manufacturing processes.

a) In addition to meeting the basic uirements of § 761.1(f) and the defion of excluded manufacturing cesses at § 761.3, manufacturers h processes inadvertently generat- PCBs and importers of products taining inadvertently generated Bs must report to EPA any exded manufacturing process or imts for which the concentration of Bs in products leaving the manuturing site or imported is greater n 2 micrograms per gram (2 μg/g, ghly 2 ppm) for any resolvable gas omatographic peak. Such reports st be filed by October 1, 1984 or, if processes or imports require rets at the time, within 90 days of ing processes or imports for which h reports are required.

) Manufacturers required to report paragraph (a) of this section must nsmit a letter notifying EPA of the nber, the type, and the location of luded manufacturing processes in ch PCBs are generated when the 3 level in products leaving any manufacturing site is greater than 2 μg/g for any resolvable gas chromatographic peak. Importers required to report by paragraph (a) of this section must transmit a letter notifying EPA of the concentration of PCBs in imported products when the PCB concentration of products being imported is greater than 2 μg/g for any resolvable gas chromatographic peak. Persons must also certify the following:

(1) Their compliance with all applicable requirements of § 761.1(f), including any applicable requirements for air and water releases and process waste disposal.

(2) Whether determinations of compliance are based on actual monitoring of PCB levels or on theoretical assessments.

(3) That such determinations of compliance are being maintained.

(4) If the determination of compliance is based on a theoretical assessment, the letter must also notify EPA of the estimated PCB concentration levels generated and released.

(c) Any person who reports pursuant to paragraph (a) of this section:

(1) Must have performed either a theoretical analysis or actual monitoring of PCB concentrations.

(2) Must maintain for a period of three years after ceasing process operations or importation, or for seven years, whichever is shorter, records containing the following information:

(i) *Theoretical analysis.* Manufacturers records must include: the reaction or reactions believed to be generating PCBs; the levels of PCBs generated; and the levels of PCBs released. Importers records must include: the reaction or reactions believed to be generating PCBs and the levels of PCBs generated; the basis for all estimations of PCB concentrations; and the name and qualifications of the person or persons performing the theoretical analysis; or

(ii) *Actual monitoring.* (A) The method of analysis.

(B) The results of the analysis, including data from the Quality Assurance Plan.

(C) Description of the sample matrix.

(D) The name of the analyst or analysts.

(E) The date and time of the analysis.

(F) Numbers for the lots from which the samples are taken.

(d) The certification required by paragraph (b) of this section must be signed by a responsible corporate officer. This certification must be maintained by each facility or importer for a period of three years after ceasing process operation or importation, or for seven years, whichever is shorter, and must be made available to EPA upon request. For the purpose of this section, a responsible corporate officer means:

(1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.

(2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(e) Any person signing a document under paragraph (d) of this section shall also make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information. Based on my inquiry of the person or persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsifying information, including the possibility of fines and imprisonment for knowing violations.

Dated: ————————————————

Signature: ————————————————

(f) This report must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, ATTN: PCB Notification. This report must be submitted by October 1, 1984 or within 90 days of starting up processes or commencing importation of PCBs.

(g) This certification process must be repeated whenever process conditions are significantly modified to make the previous certification no longer valid.

(Approved by the Office of Management and Budget under control number 2070-0008)

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[49 FR 28191, July 10, 1984; 49 FR 33019, Aug. 20, 1984, as amended at 53 FR 12524, Apr. 15, 1988]

§ 761.187 Reporting importers and by persons generating PCBs in excluded manufacturing processes.

In addition to meeting the basic requirements of § 761.1(f) and the definition of excluded manufacturing process at § 761.3, PCB-generating manufacturing processes or importers of PCB-containing products shall be considered "excluded manufacturing processes" only when the following conditions are met:

(a) Data are reported to the EPA by the owner/operator or importer concerning the total quantity of PCBs in product from excluded manufacturing processes leaving any manufacturing site in any calendar year when such quantity exceeds 0.0025 percent of that site's rated capacity for such manufacturing processes as of October 1, 1984; or the total quantity of PCBs imported in any calendar year when such quantity exceeds 0.0025 percent of the average total quantity of such product containing PCBs imported by such importer during the years 1978, 1979, 1980, 1981 and 1982.

(b) Data are reported to the EPA by the owner/operator concerning the total quantity of inadvertently generated PCBs released to the air from excluded manufacturing processes at any manufacturing site in any calendar year when such quantity exceeds 10 pounds.

(c) Data are reported to the EPA by the owner/operator concerning the total quantity of inadvertently generated PCBs released to water from excluded manufacturing processes from any manufacturing site in any calen-

ar year when such quantity exceeds
0 pounds.

(d) These reports must be submitted
) the TSCA Document Processing
enter (TS-790), Rm. L-100, Office of
oxic Substances, Environmental Pro-
ection Agency, 401 M St., SW., Wash-
gton, DC 20460, ATTN: PCB Notifi-
ation.

pproved by the Office of Management
d Budget under control number 2070-
08)

ec. 6, Pub. L. 94-469, 90 Stat. 2020 (15
S.C. 2605)

9 FR 28192, July 10, 1984, as amended at
FR 12524, Apr. 15, 1988]

61.193 Maintenance of monitoring records by persons who import, manufacture, process, distribute in commerce, or use chemicals containing inadvertently generated PCBs.

(a) Persons who import, manufac-
re, process, distribute in commerce,
use chemicals containing PCBs
esent as a result of inadvertent gen-
ation or recycling who perform any
tual monitoring of PCB concentra-
ns must maintain records of any
ch monitoring for a period of three
ars after a process ceases operation
importing ceases, or for seven years,
ichever is shorter.

b) Monitoring records maintained
rsuant to paragraph (a) of this sec-
n must contain:

1) The method of analysis.

2) The results of the analysis, in-
ding data from the Quality Assur-
ce Plan.

3) Description of the sample matrix.

4) The name of the analyst or ana-
ts.

5) The date and time of the analy-

6) Numbers for the lots from which
samples are taken.

proved by the Office of Management
Budget under control number 2070-
8)

c. 6, Pub. L. 94-469, 90 Stat. 2020 (15
.C. 2605)

FR 28193, July 10, 1984]

Subpart K—PCB Waste Disposal Records and Reports

Source: 54 FR 52752, Dec. 21, 1989, unless otherwise noted.

§ 761.202 EPA identification numbers.

(a) *General.* Any generator, commercial storer, transporter, or disposer of PCB waste who is required to have an EPA identification number under this subpart must notify EPA of his/her PCB waste handling activities, using the notification procedures and form described in § 761.205. EPA will confirm the EPA identification number of facilities already assigned one, and will assign an EPA identification number to facilities that do not have one.

(b) *Prohibitions.* After June 4, 1990:

(1) A generator of PCB waste shall not:

(i) Process, store, dispose of, transport, or offer for transportation PCB waste without having received an EPA identification number from the Agency. A generator of PCB waste who is exempted from notification under § 761.205(c)(1) or who notifies EPA in a timely manner under § 761.205(c)(2)(i), but has not yet received a unique identification number, shall be regarded as having received from EPA the identification number "40 CFR PART 761."

(ii) Offer the PCB waste to transporters, disposers, or commercial storers of PCB waste who have not received an EPA identification number.

(2) A transporter of PCB waste shall not:

(i) Transport PCB waste without having received an EPA identification number from EPA.

(ii) Deliver PCB waste to transporters, disposers, or commercial storers of PCB waste that have not received an EPA identification number.

(3) A commercial storer of PCB waste shall not accept any PCB waste for storage without having received an EPA identification number from EPA.

(4) A disposer of PCB waste shall not accept any PCB waste for disposal without having received an EPA identification number from EPA. A disposer of PCB waste who owns more than one disposal facility or mobile treat-

ment unit shall not accept waste unless the disposer has received an EPA identification number for each facility or mobile unit.

(c) *PCB waste handled prior to effective date of this subpart.* Generators (other than generators exempt from notification under § 761.205(c)(1)), commercial storers, transporters, and disposers of PCB waste who are required to have EPA identification numbers under this subpart, and who were engaged in PCB waste handling activities on or prior to February 5, 1990, are not subject to the prohibitions of paragraph (b) of this section if they have applied for an EPA identification number in accordance with the applicable notification procedures of § 761.205. Such persons shall use the EPA identification number "40 CFR PART 761," or a number assigned to the persons by EPA or a State under RCRA, until EPA issues to such persons a specific identification number under § 761.205(a), (b), or (c).

(d) *PCB waste first handled after effective date of this subpart.* Generators (other than generators exempt from notification under § 761.205(c)(1)), commercial storers, transporters, and disposers of PCB waste who are required to have EPA identification numbers under this subpart, and who first engage in PCB waste activities after February 5, 1990, are subject to the prohibitions in paragraph (b) of this section.

§ 761.205 Notification of PCB waste activity (EPA Form 7710–53).

(a)(1) All commercial storers, transporters, and disposers of PCB waste who were engaged in PCB waste handling activities on or prior to February 5, 1990 shall notify EPA of their PCB waste activities by filing EPA Form 7710-53 with EPA by no later than April 4, 1990. Upon receiving the notification form, EPA will assign an EPA identification number to each entity that notifies.

(2) All generators (other than generators exempt from notification under paragraph (c)(1) of this section), commercial storers, transporters, and disposers of PCB waste who first engage in PCB waste handling activities after February 5, 1990, shall notify EPA of their PCB waste activities by filing EPA Form 7710-53 with EPA prior to engaging in PCB waste handling activities.

(3) Any person required to notify EPA under this section shall file with EPA Form 7710-53. Copies of EPA Form 7710-53 are available from the Chemical Regulation Branch (TS-798), Office of Toxic Substances, Environmental Protection Agency, 401 M St. SW, Washington, DC 20460. Descriptive information and instructions for filling in the form are included in paragraphs (a)(4) (i) through (vii) of this section.

(4) All of the following information shall be provided to EPA on Form 7710-53:

(i) The name of the facility, and the name of the owner or operator of the facility.

(ii) EPA identification number, if any, previously issued to the facility.

(iii) The facility's mailing address.

(iv) The location of the facility.

(v) The facility's installation contact and telephone number.

(vi) The type of PCB waste activity engaged in at the facility.

(vii) Signature of the signer of the certification statement, typed or printed name and official title of signer and date signed.

(viii) EPA has determined that the information in paragraphs (a)(4)(i through (a)(4)(vii) of this section shall not be treated as confidential business information. This information will be disclosed to the public without further notice to the submitter unless the submitter provides a written justification (submitted with the notification form which demonstrates extraordinary reasons why the information should be entitled to confidential treatment.

(b) Generators (other than those generators exempt from notification under paragraph (c)(1) of this section), commercial storers, transporters, and disposers of PCB waste who have previously notified EPA or a State of hazardous waste activities under RCRA shall notify EPA of their PCB waste activities under this part by filing EPA Form 7710-53 with EPA by no later than April 4, 1990. The notification shall include the EPA identification number previously issued by

EPA or the State and upon receipt of the notification, EPA shall verify and authorize the use of the previously issued identification number for PCB waste activities.

(c)(1) Generators of PCB waste need not notify EPA and receive unique EPA identification numbers under this section, unless their PCB waste activities are described in paragraph (c)(2) of this section. Generators exempted from notifying EPA under this paragraph shall use the generic identification number "40 CFR PART 761" on the manifests, records, and reports which they shall prepare under this subpart, unless such generators elect to use a unique EPA identification number previously assigned to them under RCRA by EPA or a State.

(2) Generators of PCB waste who use, own, service, or process PCBs or PCB Items shall notify EPA of their PCB waste activities only if they own or operate PCB storage facilities subject to the storage requirements of § 761.65 (b) or (c)(7). Such generators shall notify EPA in the following manner:

(i) Generators storing PCB waste subject to the storage requirements of § 761.65 (b) or (c)(7) shall notify EPA by filing EPA Form 7710-53 with EPA by no later than April 4, 1990.

(ii) Generators who desire to commence storage of PCB waste after February 5, 1990 shall notify EPA and receive an EPA identification number before they may commence storage of PCBs at their facilities established under § 761.65 (b) or (c)(7).

(iii) A separate notification shall be submitted to EPA for each PCB storage facility owned or operated by generators of PCB waste. Upon receiving these notifications, EPA will assign generators unique EPA identification numbers for each storage facility notifying EPA under this section.

(d) Persons required to notify under this section shall file EPA Form 7710-53 with EPA by mailing the form to the following address: Chief, Chemical Regulation Branch (TS-798), Office of Toxic Substances, Environmental Protection Agency, Rm. NE-117, 401 M St., SW, Washington, DC 20460.

(e) The requirements under this section to notify EPA and obtain EPA identification numbers shall in no case excuse compliance by any person subject to the 1-year limit on storage prior to disposal under § 761.65(a).

(Approved by the Office of Management and Budget under control number 2070-0112)

§ 761.207 The manifest—general requirements.

(a) A generator who relinquishes control over PCB wastes by transporting, or offering for transport by his own vehicle or by a vehicle owned by another person, PCB waste for commercial off-site storage or off-site disposal shall prepare a manifest on EPA Form 8700-22, and if necessary, a continuation sheet. The generator shall specify:

(1) For each bulk load of PCBs, the identity of the PCB waste, the earliest date of removal from service for disposal, and the weight in kilograms of the PCB waste.

(2) For each PCB Article Container or PCB Container, the unique identifying number, type of PCB waste (*e.g.*, soil, debris, small capacitors), earliest date of removal from service for disposal, and weight in kilograms of the PCB waste contained.

(3) For each PCB Article not in a PCB Container or PCB Article Container, the serial number if available, or other identification if there is no serial number, the date of removal from service for disposal, and weight in kilograms of the PCB waste in each PCB Article.

(b) EPA does not maintain supplies of printed copies of Form 8700-22 for public use, although printed copies of the manifest may be available from State offices. Camera-ready copies of the form are available for printing purposes from State offices, EPA Regional Offices, and EPA Headquarters.

(c) If the State to which the shipment is manifested (i.e., consignment State) supplies the manifest and requires its use, then the generator must use that manifest.

(d) If the consignment State does not supply the manifest, but the State in which the generator is located (i.e., generator State) supplies the manifest and requires its use, then the generator must use that State's manifest.

(e) If both the consignment State and the generator State supply manifests and require their use, the generator must use the consignment State's manifest.

(f) If neither the generator State nor the consignment State supplies the manifest, the generator may obtain the manifest from any source.

(g) A generator shall designate on the manifest one off-site commercial storage or disposal facility approved under this part for the commercial storage or disposal of the PCBs and PCB Items described on the manifest.

(h) If the transporter is unable to deliver the PCB waste to the designated disposer or commercial storer, the transporter must contact the generator of the PCB waste for instructions. The generator shall either designate another approved disposer or commercial storer, or instruct the transporter to return the PCB waste back to the generator.

(i) The manifest which accompanies the PCB waste shall consist of at a minimum the number of copies required to provide the generator, the initial transporter, each subsequent transporter, and the owner or operator of the designated commercial storage or disposal facility with one legible copy each for their records, and one additional copy to be returned to the generator by the owner or operator of the first designated commercial storage or disposal facility.

(j) The requirements of this section apply only to PCB wastes as defined in § 761.3. This includes PCB wastes with PCB concentrations below 50 ppm where the PCB concentration below 50 ppm was the result of dilution; these PCB wastes are required, under § 761.1(b), to be managed as if they contained PCB concentrations greater than 50 ppm. An example of such a PCB waste is spill cleanup material containing less than 50 ppm PCBs when the spill involved material containing greater than 50 ppm.

§ 761.208 Use of the manifest.

(a)(1) The generator of PCB waste shall:

(i) Sign the manifest certification by hand.

(ii) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest.

(iii) Retain one copy among its records in accordance with § 761.209(a).

(iv) Give to the transporter the remaining copies of the manifest that will accompany the shipment of PCB waste.

(2) For bulk shipments of PCB waste within the United States transported solely by water, the generator shall send three copies of the manifest dated and signed in accordance with this section directly to the owner or operator of the designated commercial storage or disposal facility. Copies of the manifest are not required for each transporter.

(3) For rail shipments of PCB waste within the United States which originate at the site of generation, the generator shall send at least three copies of the manifest dated and signed in accordance with this section to.

(i) The next non-rail transporter, if any.

(ii) The designated commercial storage or disposal facility if transported solely by rail.

(4) When a generator has employed an independent transporter to transport the PCB waste to a commercial storer or disposer, the generator shall confirm by telephone, or by other means of confirmation agreed to by both parties, that the commercial storer or disposer actually received the manifested waste. The generator shall confirm receipt of the waste by close of business the day after he receives the manifest hand-signed by the commercial storer or disposer, in accordance with paragraph (c)(1)(iv) of this section. If the generator has not received the hand-signed manifest within 35 days after the independent transporter accepted the PCB waste, the generator shall telephone, or communicate with by some other agreed-upon means, the disposer or commercial storer to determine whether the PCB waste has actually been received. If the PCB waste has not been received, the generator shall contact the independent transporter to determine

disposition of the PCB waste. If
generator has not received a hand-
ned manifest from an EPA-ap-
ved facility within 10 days from
date of the telephone call or other
eed upon means of communication,
the independent transporter, the
erator shall submit an exception
ort to the EPA Regional Adminis-
tor for the Region in which the
erator is located, as specified in
1.215. The generator shall retain a
tten record of all telephone or
er confirmations to be included in
annual document log, in accord-
e with § 761.180.

)(1) A transporter shall not accept
3 waste from a generator unless it
ccompanied by a manifest signed
the generator in accordance with
agraph (a)(1) of this section,
ept that a manifest is not required
ny one of the following conditions
ts:

The shipment of PCB waste con-
solely of PCB wastes with PCB
entrations below 50 ppm, unless
PCB concentration below 50 ppm
the result of dilution, in which
§ 761.1(b) requires that the waste
nanaged as if it contained PCBs at
concentration prior to dilution.

The PCB waste is accepted by
transporter for transport only to a
age or disposal facility owned or
ated by the generator of the PCB
e.

Before transporting the PCB
e, the transporter shall sign and
the manifest acknowledging ac-
ance of the PCB waste from the
rator. The transporter shall
n a signed copy to the generator
re leaving the generator's facility.
The transporter shall ensure that
manifest accompanies the PCB
e.

A transporter who delivers PCB
e to another transporter, or to the
nated commercial storer or dis-
r of PCB waste, shall:

Obtain the date of delivery and
handwritten signature of the sub-
ent transporter of PCB waste, or
e owner or operator of the desig-
l commercial storage or disposal
ty on the manifest.

Retain one copy of the manifest
cordance with § 761.209(b).

(iii) Give the remaining copies of the manifest to the accepting transporter of PCB waste, or to the designated commercial storage or disposal facility.

(5) The requirements of paragraphs (b) (3) and (4) of this section shall not apply to transporters of bulk shipments by water if all of the following conditions are met:

(i) The PCB waste is delivered by water (bulk shipment) to the designated commercial storage or disposal facility.

(ii) A shipping paper containing all the information required on the manifest (excluding EPA identification number, generator certification, and signatures) accompanies the PCB waste.

(iii) The transporter delivering the PCB waste obtains the date of delivery and handwritten signature of the owner or operator of the designated commercial storage or disposal facility on either the manifest or the shipping paper.

(iv) The person delivering the PCB waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility.

(v) A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with § 761.209(b).

(6) For shipments involving rail transportation, the requirements of paragraphs (b) (3) and (b)(4) of this section shall not apply. Instead, the requirements described at § 263.20(f) of this chapter for the rail transportation of hazardous waste apply to such shipments. The rail transporter shall retain one copy of the manifest or rail shipping paper in accordance with § 761.209(b).

(7) The transporter shall deliver the entire quantity of PCB waste accepted from a generator or transporter to either of the following destinations:

(i) The designated commercial storage or disposal facility listed on the manifest.

(ii) The next designated transporter of PCB waste.

(8) If the PCB waste cannot be delivered in accordance with paragraph

(b)(7) of this section, the transporter shall contact the generator for further directions and shall revise the manifest and/or return the PCB waste according to the generator's instructions.

(9) No provision of this section shall be construed to affect or limit the applicability of any requirement applicable to transporters of PCB waste under regulations issued by the Department of Transportation (DOT) and set forth at 49 CFR part 171.

(c)(1) If a commercial storage or disposal facility receives an off-site shipment of PCB waste accompanied by a manifest, the owner or operator, or his agent, shall:

(i) Sign and date each copy of the manifest to certify that the PCB waste covered by the manifest was received.

(ii) Note any significant discrepancies in the manifest (as defined in § 761.210(a)(1)) on each copy of the manifest.

(iii) Immediately give the transporter at least one copy of the signed manifest.

(iv) Within 30 days after the delivery, send a copy of the manifest to the generator.

(v) Retain a copy of each manifest among the facility's records in accordance with § 761.209(d).

(2) If a commercial storage or disposal facility receives PCB waste from a rail or water (bulk shipment) transporter accompanied by a shipping paper containing all the information required on the manifest except the EPA identification numbers, generator's certification, and signatures, the owner or operator, or his agent, shall:

(i) Sign and date each copy of the manifest or shipping paper to certify that the PCB waste covered by the manifest or shipping paper was received.

(ii) Note any significant discrepancies in the manifest or shipping paper on each copy of the manifest or shipping paper.

(iii) Immediately give the rail or water transporter at least one copy of the manifest or shipping paper, if applicable.

(iv) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the owner or operator shall send a copy of the shipping paper signed and dated to the generator.

(v) Retain at the commercial storage or disposal facility a copy of the manifest and shipping paper, if signed in lieu of the manifest, in accordance with § 761.209(d).

(3) Whenever an off-site shipment of PCB waste is initiated from a commercial storage or disposal facility, the owner or operator of the commercial storage or disposal facility shall comply with the manifest requirements that apply to generators of PCB waste.

§ 761.209 Retention of manifest records.

(a) A generator of PCB waste shall keep a copy of each manifest signed in accordance with § 761.208(a)(1) until the generator receives a signed copy from the designated commercial storage or disposal facility which received the PCB waste. The copy signed by the commercial storer or disposer shall be retained for at least 3 years from the date the PCB waste was accepted by the initial transporter. A generator subject to annual document requirements under § 761.180 shall retain copies of each manifest for the period required by § 761.180(a).

(b)(1) A transporter of PCB waste shall keep a copy of the manifest signed by the generator, transporter and the next designated transporter, if applicable, or the owner or operator of the designated commercial storage or disposal facility. This copy shall be retained for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(2) For shipments of PCB waste delivered to the designated commercial storage or disposal facility by water (bulk shipment), each water (bulk shipment) transporter shall retain a copy of the shipping paper described in § 761.208(b)(5)(ii) for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(3) For shipments of PCB waste by rail within the United States:

(i) The initial rail transporter shall keep a copy of the manifest and the shipping paper required to accompany the PCB waste for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(ii) The final rail transporter shall keep a copy of the signed manifest, or the required shipping paper if signed by the designated facility in lieu of the manifest, for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(c) The owner or operator of a PCB commercial storage or disposal facility that receives off-site shipments of PCB waste shall retain at the facility for at least 3 years a copy of each manifest or shipping paper that the owner or operator signs in accordance with § 761.208(c)(1) or (c)(3).

(d) The periods of record retention required by this section shall be extended automatically during the course of any outstanding enforcement action regarding the regulated activity.

(Approved by the Office of Management and Budget under control number 2070-0112)

§ 761.210 Manifest discrepancies.

(a) Manifest discrepancies are differences between the quantity or type of PCB waste designated on the manifest or shipping paper and the quantity or type of PCB waste actually delivered to and received by a designated facility.

(1) Significant discrepancies in quantity are:

(i) Variations greater than 10 percent in weight of PCB waste in containers.

(ii) Any variation in piece count, such as a discrepancy of one PCB Transformer or PCB Container or PCB Article Container in a truckload.

(2) Significant discrepancies in type of PCB waste are obvious differences which may be discovered by inspection or waste analysis, such as the substitution of solids for liquids or the substitution of high concentration PCBs (above 500 ppm) with lower concentration materials.

(b) Upon discovering a significant discrepancy, the owner or operator of the designated commercial storage or disposal facility shall attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days after receiving the PCB waste, such owner or operator shall immediately submit to the Regional Administrator for the Region in which the designated facility is located a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

(Approved by the Office of Management and Budget under control number 2070-0112)

§ 761.211 Unmanifested waste report.

(a) After April 4, 1990, if a PCB commercial storage or disposal facility receives any shipment of PCB waste from an off-site source without an accompanying manifest or shipping paper (where required in place of a manifest), and any part of the shipment consists of any PCB waste regulated for disposal, then the owner or operator of the commercial storage or disposal facility shall attempt to contact the generator, using information supplied by the transporter, to obtain a manifest or to return the PCB waste.

(b) If the owner or operator of the commercial storage or disposal facility cannot contact the generator of the PCB waste, he shall notify the Regional Administrator of the EPA region in which his facility is located of the unmanifested PCB waste so that the Regional Administrator can determine whether further actions are required before the owner or operator may store or dispose of the unmanifested PCB waste.

(c) Within 15 days after receiving the unmanifested PCB waste, the owner or operator shall prepare and submit a report to the Regional Administrator for the Region in which the commercial storage or disposal facility is located and to the Regional Administrator for the Region in which the PCB waste originated, if known. The report may be submitted on EPA Form 8700-13B, or by a written letter designated "Unmanifested Waste Report." The report shall include the following information:

(1) The EPA identification number, name, and address of the PCB commercial storage or disposal facility.

(2) The date the commercial storage or disposal facility received the unmanifested PCB waste.

(3) The EPA identification number, name, and address of the generator and transporter, if available.

(4) A description of the type and quantity of the unmanifested PCB waste received at the facility.

(5) A brief explanation of why the waste was unmanifested, if known.

(6) The disposition made of the unmanifested waste by the commercial storage or disposal facility, including:

(i) If the waste was stored or disposed by that facility, was the generator identified and was a manifest subsequently supplied.

(ii) If the waste was sent back to the generator, why and when.

(Approved by the Office of Management and Budget under control number 2070-0112)

§ 761.215 Exception reporting.

(a) A generator of PCB waste, who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated PCB commercial storage or disposal facility within 35 days of the date the waste was accepted by the initial transporter, shall immediately contact the transporter and/or the owner or operator of the designated facility to determine the status of the PCB waste.

(b) A generator of PCB waste shall submit an Exception Report to the Regional Administrator for the Region in which the generator is located if the generator has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The Exception Report shall include the following:

(1) A legible copy of the manifest for which the generator does not have confirmation of delivery.

(2) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the PCB waste and the results of those efforts.

(c) A disposer of PCB waste shall submit a One-year Exception Report to the Regional Administrator for the Region in which the disposal facility is located whenever the following occurs:

(1) The disposal facility receives PCBs or PCB Items on a date more than 9 months from the date the PCBs or PCB Items were removed from service for disposal, as indicated on the manifest or continuation sheet; and

(2) Because of contractual commitments or other factors affecting the facility's disposal capacity, the disposer of PCB waste could not dispose of the affected PCBs or PCB Items within 1 year of the date of removal from service for disposal.

(d) A generator or commercial storer of PCB waste who manifests PCBs or PCB Items to a disposer of PCB waste shall submit a One-year Exception Report to the Regional Administrator for the Region in which the generator or commercial storer is located whenever the following occurs:

(1) The generator or commercial storer transferred the PCBs or PCB Items to the disposer of PCB waste on a date within 9 months from the date of removal from service for disposal of the affected PCBs or PCB Items, as indicated on the manifest or continuation sheet; and

(2) The generator or commercial storer either has not received within 13 months from the date of removal from service for disposal a Certificate of Disposal confirming the disposal of the affected PCBs or PCB Items, or the generator or commercial storer receives a Certificate of Disposal confirming disposal of the affected PCBs or PCB Items on a date more than 1 year after the date of removal from service.

(e) The One-year Exception Report shall include:

(1) A legible copy of any manifest or other written communication relevant to the transfer and disposal of the affected PCBs or PCB Items.

(2) A cover letter signed by the submitter or an authorized representative explaining:

(i) The date(s) when the PCBs or PCB Items were removed from service for disposal.

(ii) The date(s) when the PCBs or PCB Items were received by the submitter of the report, if applicable.

(iii) The date(s) when the affected PCBs or PCB Items were transferred to a designated disposal facility.

(iv) The identity of the transporters, commercial storers, or disposers known to be involved with the transaction.

(v) The reason, if known, for the delay in bringing about the disposal of the affected PCBs or PCB Items within 1 year from the date of removal from service for disposal.

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54 FR 52752, Dec. 21, 1989, as amended at 5 FR 26205, June 27, 1990]

761.218 Certificate of disposal.

(a) For each shipment of manifested PCB waste that the owner or operator f a disposal facility accepts by signing he manifest, the owner or operator of he disposal facility shall prepare a Certificate of Disposal for the PCBs nd PCB Items disposed of at the faility, which shall include:

(1) The identity of the disposal facily, by name, address, and EPA identication number.

(2) The identity of the PCB waste ffected by the Certificate of Disposal ncluding reference to the manifest umber for the shipment.

(3) A statement certifying the fact of isposal of the identified PCB waste, ncluding the date(s) of disposal, and entifying the disposal process used.

(4) A certification as defined in 761.3.

(b) The Certificate of Disposal shall e sent to the generator identified on e manifest which accompanied the ipment of PCB waste within 30 days the date that disposal of the PCB aste identified on the manifest was mpleted.

(c) The disposal facility shall keep a py of each Certificate of Disposal nong the records that it retains der § 761.180(b).

d)(1) Generators of PCB waste shall ep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records they retain under § 761.180(a).

(2) Commercial storers of PCB waste shall keep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records the retain under § 761.180(b).

PART 762—FULLY HALOGENATED CHLOROFLUOROALKANES

Subpart A—General Provisions

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AUTHORITY: 15 U.S.C. 2605, 2607, and 2611.

SOURCE: 45 FR 43721, June 30, 1980, unless otherwise noted.

Subpart A—General Provisions

§ 762.1 Scope.

This part prohibits the manufacture, processing, and distribution in commerce of fully halogenated chlorofluoroalkanes for those aerosol propellant uses which are subject to the Toxic Substances Control Act (TSCA), requires submission of annual reports, and lists the exemptions to the prohibitions.

§ 762.3 Definitions.

For the purposes of this part:

(a) The term "aerosol propellant" means a liquefied or compressed gas in a container where the purpose of the liquefied or compressed gas is to expel from the container liquid or solid material different from the aerosol propellant.

(b) The term "person" includes any natural person, corporation, firm, company, joint venture, partnership, sole proprietorship, association, or any other business entity, any State or political sub-division thereof, any municipality, any interstate body and any department, agency, or instrumentality of the Federal Government.

(c) The term "nonconsumer article" means any article subject to TSCA which is not a "consumer product" within the meaning of the Consumer Product Safety Act (CPSA), 15 U.S.C. 2052.

(d) The terms "Administrator," "chemical substance," "commerce," "distribute in commerce," "manufacture," "process," "processor," "State," and "United States" have the same meanings as in 15 U.S.C. 2602.

Subpart B—[Reserved]

Subpart C—Prohibitions, Exemptions, and Certification Requirements

§ 762.45 Manufacturing.

(a) After October 15, 1978, no person may manufacture, except to import, any fully halogenated chlorofluoroalkane for any aerosol propellant use except as follows:

(1) For use in an article which is a food, food additive, drug, cosmetic, or device exempted under 15 U.S.C. 2602;[1] or

(2) For those essential uses listed in § 762.58.

(3) For exempted uses listed in § 762.59.

(b) After December 15, 1978, no person may import into the customs territory of the United States any fully halogenated chlorofluoroalkane, whether as a chemical substance or as a component of a mixture or article, for any aerosol propellant use except as follows:

(1) For use in an article which is a food, food additive, drug, cosmetic, or device exempted under 15 U.S.C. 2602; or

(2) For those essential uses listed in § 762.58.

(3) For exempted uses listed in § 762.59.

(c) Every person manufacturing fully halogenated chlorofluoroalkanes for aerosol propellant uses after October 15, 1978, must obtain a signed statement from every person purchasing the fully halogenated chlorofluoroalkanes from him for any use. This statement must specify whether the fully halogenated chlorofluoroalkanes are being purchased:

(1) For aerosol propellant uses permitted under either 40 CFR Part 762 or 21 CFR 2.125, or

(2) For other uses.

§ 762.50 Processing.

(a) After December 15, 1978, no person may process any fully halogenated chlorofluoroalkane into any aerosol propellant article except as follows:

(1) For use in an article which is a food, food additive, drug, cosmetic, or device exempted under 15 U.S.C. 2602; or

(2) For those essential uses listed in § 762.58.

(3) For exempted uses listed in § 762.59.

(b) After December 15, 1978, no person may process any fully halogenated chlorofluoroalkane into any aerosol propellant article intended for export except as follows:

(1) For use in an article which is a food, food additive, drug, cosmetic, or device exempted under 15 U.S.C. 2602; or

(2) For those essential uses listed in § 762.58.

(3) For exempted uses listed in § 762.59.

§ 762.55 Distribution in commerce.

After December 15, 1978, no person may distribute in commerce any fully halogenated chlorofluoroalkane for processing into any aerosol propellant article except as follows:

---

[1] The Food and Drug Administration has promulgated separate regulations on use of fully halogenated chlorofluoroalkanes in these articles at 21 CFR 2.125.

(a) For use in an article which is a food, food additive, drug, cosmetic, or device exempted under 15 U.S.C. 2602; or

(b) For those essential uses listed in § 762.58.

(c) For exempted uses listed in § 762.59.

§ 762.58 Essential use exemptions.

The following aerosol propellant uses of fully halogenated chlorofluoroalkanes are essential and exempt from §§ 762.45, 762.50 and 762.55:

(a) Mercaptan stench warning devices.

(b) Release agent for molds used in the production of plastic and elastomeric materials.

(c) *Flying insect pesticides:* (1) For use in nonresidential food handling areas, and (2) for space spraying of aircraft.

(d) Diamond-grit spray.

(e) Nonconsumer articles used as cleaner-solvents, lubricants, or coatings for electrical or electronic equipment.

(f) Articles necessary for safe maintenance and operation of aircraft.

(g) Uses essential to the military preparedness of the United States as determined by the Administrator and the Secretary of Defense.

(h) Pharmaceutical rotary tablet press punch lubricants.

(i) Automatic timed-release insecticide dispensing system for facilities in which tobacco is stored for three or more years, for use from May 18, 1981 to December 31, 1981.

(Sec. 6, 90 Stat. 2020; (15 U.S.C. 2605))

[45 FR 43721, June 30, 1980, as amended at 46 FR 27122, May 18, 1981; 47 FR 149, 150, Jan. 5, 1982]

§ 762.59 Special exemptions.

(a) Inkless fingerprinting systems until August 1, 1981.

(b) Exemption for producers of pyrethrin pesticide formulations.

(1) Producers of pyrethrin pesticide formulations are exempt from § 762.50 for the purpose of processing fully halogenated chlorofluoroalkane aerosol propellants into pyrethrin aerosol propellant articles (containers) if the containers were ordered before June 30, 1978. This exemption is conditional upon notifying EPA before the chlorofluoroalkanes are processed of:

(i) The number of aerosol propellant article containers to be filled,

(ii) The date the aerosol containers were ordered from a supplier,

(iii) Any serial numbers that can be used to identify these containers, and

(iv) The quantity of fully halogenated chlorofluoroalkanes needed to fill the containers.

(2) The information specified in paragraph (b)(1) of this section must be sent to the Pesticides and Toxic Substances Enforcement Division, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(c) Effective June 1, 1982, Virginia Chemicals Inc. (VCI) may process chlorofluorocarbons (CFCs) for incorporation into its automatic timed-release insecticide dispensing A-System for use before December 31, 1982. This exemption is further limited by the following conditions:

(1) Sales shall be made only to VCI's 1981 A-System customers for use limited to those tobacco storage facilities where the A-System was employed in 1981.

(2) The total volume of CFCs which can be processed in 1982 for the A-System by VCI shall also be limited to the total volume processed for the A-System in 1981. The Agency may authorize the processing of a total volume of CFCs for the A-System in 1982 which exceeds by no more than twenty percent (20%) the total volume processed in 1981. The Director of the Pesticides and Toxic Substances Enforcement Division will authorize such an increase upon a finding that VCI has submitted data which substantiates that the 1982 insect infestation is substantially more severe and more lengthy than the 1981 infestation.

(3) The total volume of CFCs which may be processed for the A-System in 1982 is to be determined in the following manner.

(i) First, determine the total volume of CFCs processed for the A-System in 1981.

(ii) Second, determine the total volume of CFCs processed for the A-System which was in VCI's inventory on January 1, 1982, including the total volume of CFCs in canisters which have been returned to VCI for refilling.

(iii) Third, determine the volume of CFCs in A-System canisters which remain in the 1981 customers' inventories. This listing must be certified as accurate by each customer.

(iv) Fourth, subtract the combined amounts determined in (ii) and (iii) from the total volume of CFCs processed for the A-System in 1981, to determine the volume of CFCs which may be processed for A-System use in 1982.

(v) These calculations must be submitted to EPA's Pesticides and Toxic Substances Enforcement Division, prior to commencing any processing of CFCs for the A-System in 1982, and no later than one month after the effective date of this rule.

(4) By July 1, 1982, VCI shall submit to EPA's Pesticides and Toxic Substances Enforcement Division (PTSED) [EN-342], Mr. Ralph Turpin, Acting Chief, Case Development and Legal Branch, 401 M Street SW., Washington, DC 20460 (202-755-0899), the following information:

(i) The total volume of CFCs purchased by VCI in 1981, and from whom they were purchased.

(ii) The total volume of processed and unprocessed CFCs that VCI had in its inventory on January 1, 1981 and on January 1, 1982.

(iii) The total volume of CFCs processed for the A-System that VCI had in its inventory on January 1, 1981 and on January 1, 1982.

(iv) The total volume of CFCs that VCI's 1981 customers of the A-system had in their inventories on January 1, 1981 and on January 1, 1982.

(v) The total volume of CFCs processed for the A-System in 1981.

(vi) The total volume of CFCs sold in the A-System in 1981.

(vii) A list of the 1981 A-System customers.

(viii) The total volume of CFCs for the A-System which each customer was sold in 1981. This shall include the total number of A-System canisters sold to each customer and the total number of used canisters returned to VCI from each customer.

(5) By January 31, 1983, VCI shall submit to EPA's Pesticides and Toxic Substances Enforcement Division (PTSED) [EN-342], Mr. Ralph Turpin, Acting Chief, Case Development and Legal Branch, 401 M Street SW., Washington, DC 20460 (202-755-0899), the following information:

(i) The total volume of CFCs purchased by VCI in 1982, and from whom they were purchased.

(ii) The total volume of processed and unprocessed CFCs that VCI had in its inventory on January 1, 1983.

(iii) The total volume of CFCs processed for the A-System that VCI had in its inventory on January 1, 1983.

(iv) The total volume of CFCs that VCI's 1981 customers of the A-System had in their inventories on January 1, 1983.

(v) The total volume of CFCs processed for the A-System in 1982.

(vi) The total volume of CFCs sold in the A-System in 1982.

(vii) A list of 1982 A-System customers.

(viii) The total volume of CFCs for the A-System which each customer was sold in 1982. This shall include the total number of A-System canisters sold to each customer and the total number of used canisters returned to VCI from each customer.

(6) By July 1, 1982, VCI shall notify in writing its 1981 customers of the A-System that the CFC-propelled system will no longer be sold for use after December 31, 1982.

(Sec. 6, 90 Stat. 2020, (15 U.S.C. 2065)

[45 FR 43721, June 30, 1980, as amended at 47 FR 23716, June 1, 1982]

Subpart D—Records and Reports

§ 762.60 General reporting requirements.

(a) Annual reports must be submitted by March 31, 1980, 1981, and 1982. The 1980 manufacturers report must cover manufacturing from October 16, 1978, through December 31, 1979. The 1980 processors report must cover processing from December 16, 1978, through December 31, 1979. Subsequent annual reports must provide information for the preceding calendar year.

(b) Annual reports must be submitted to the Pesticides and Toxic Substances Enforcement Division, Office of Enforcement (EN-342), Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

(c) Annual reports must be submitted by registered mail.

§ 762.65 Manufacturers of fully halogenated chlorofluoroalkanes for aerosol propellant uses.

(a) Every person who after October 15, 1978, manufactures fully halogenated chlorofluoroalkanes for aerosol propellant uses subject to the TSCA must submit an annual report.

(b) Every annual report submitted by a manufacturer must contain the following information and conform to the following format:

(1) Page one:

(i) Name of business,

(ii) Business address,

(iii) Chief executive officer,

(iv) Addresses of all facilities at which fully halogenated chlorofluoroalkanes are manufactured,

(v) Name, business address, and telephone number of individual most knowledgeable of the contents of this report. This report covers manufacture of fully halogenated chlorofluoroalkanes for aerosol propellant uses from (date to date).

(2) Page two (and subsequent pages if necessary):

Purchaser	Shipping addresses	Total quantity purchased (in pounds)	Quantity for aerosol propellant uses (in pounds)	Quantity for other uses (in pounds)
st name of customers who purchased for aerosol propellant uses	(List)	(List)	(List)	(List)

State total quantity in pounds of fully halogenated chlorofluoroalkanes manufactured for all uses for the time eriod covered by this report.

(3) At the bottom of the last page nake the following statement and certification:

I understand that I may assert a claim of usiness confidentiality by marking any art or all of this information as "TSCA onfidential Business Information" and nat information so marked will not be dis- osed except in accordance with the proce- ures set forth in 40 CFR Part 2. I further nderstand that if I do not mark this infor- ation as confidential, EPA may disclose it ublicly without providing me notice of an pportunity to object. I certify that to the est of my knowledge the contents of this port are accurate and complete.

ate ——————————

gned ——————————

osition Title ——————————

(4) The statement and certification quired by paragraph (b)(3) of this ction must be signed by the chief ex- utive officer of the manufacturer.

§ 762.70 Processors of fully halogenated chlorofluoroalkanes for aerosol propellant uses.

(a) Every person who after December 15, 1978, processes fully halogenated chlorofluoroalkanes for aerosol propellant uses subject to the TSCA must submit an annual report. A separate report must be submitted for each processing facility.

(b) Every report submitted by a processor must contain the following information and conform to the following format:

(1) Page one:

(i) Name of business,

(ii) Business address,

(iii) Chief executive officer,

(iv) Facility address,

(v) Name, business address, and telephone number of individual most knowledgeable of the contents of this report. This report covers purchases and processing of fully halogenated chlorofluoroalkanes for aerosol propellant uses from (date to date).

(2) Page two (and subsequent pages if necessary):

Purchases of fully halogenated chlorofluoroalkanes:

Purchased from/Quantity purchased (in pounds)

(List names and business addresses)/(List).

Processing of fully halogenated chlorofluoroalkanes:

Use and Quantity (in pounds)

1. Mercaptan mine warning device (list).
2. Release agent.
3. Pesticides.
4. Diamond-grit spray.
5. Electrical/electronic.
6. Aviation.
7. Defense.
8. Food, food additives, drugs, cosmetics, and devices.
9. Other (explain).

(3) At the bottom of the last page make the following statement and certification:

I understand that I may assert a claim of business confidentiality by marking any part or all of this information as "TSCA Confidential Business Information" and that information so marked will not be disclosed except in accordance with the procedures set forth in 40 CFR Part 2. I further understand that if I do not mark this information as confidential, EPA may disclose it publicly without providing me notice of an opportunity to object. I certify that to the best of my knowledge the contents of this report are accurate and complete.

Date ————————————————

Signed ————————————————

Position Title ————————————————

(4) The statement and certification required by paragraph (b)(3) of this section must be signed by the highest official at the processing facility for which the report is being submitted.

PART 763—ASBESTOS

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AUTHORITY: 15 U.S.C. 2605 and 2607(c).

Subparts A–C—[Reserved]

Subpart D—Reporting Commercial and Industrial Uses of Asbestos

SOURCE: 47 FR 33207, July 30, 1982, unless otherwise noted.

§ 763.60 Scope and compliance.

(a) This rule requires reporting by persons who manufacture, import, or process asbestos. Different reporting requirements are imposed depending on the person's activity. Manufacturers, importers and processors of commercial and industrial asbestos fiber must report quantity, use, and exposure information. Importers of mixtures and articles containing asbestos and processors of asbestos mixtures will report to EPA in two phases. They initially must report limited information about processing or importation. Some must subsequently report additional information if they are selected as respondents in a sample survey.

(b) Subsection 15(3) of TSCA makes it unlawful for any person to fail or refuse to submit information required under this rule. Section 16 provides that a violation of section 15 renders a person liable to the United States for a civil penalty and possible criminal prosecution. Under section 17, the district courts of the United States have jurisdiction to restrain any violation of section 15.

§ 763.63 Definitions.

The definitions in section 3 of TSCA and the following definitions apply for this rule:

(a) "Asbestos" means the asbestiform varieties of: chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite; and actinolite.

(b) "Asbestos mixture" means a mixture which contains bulk asbestos or another asbestos mixture as an intentional component. An asbestos mixture may be either amorphous or a sheet, cloth fabric, or other structure. This term does not include mixtures which contain asbestos as a contaminant or impurity.

(c) The term "bulk asbestos" means any quantity of asbestos fiber of any type or grade, or combination of types or grades, that is mined or milled with the purpose of obtaining asbestos. This term does not include asbestos that is produced or processed as a contaminant or an impurity.

(d) "EPA" means the United States Environmental Protection Agency.

(e) "Importer" means anyone who imports any chemical substance, including a chemical substance as part of a mixture or article, into the customs territory of the U.S. and includes the person liable for the payment of any duties on the merchandise, or an authorized agent on his behalf. Importer also includes, as appropriate:

(1) The consignee.

(2) The importer of record.

(3) The actual owner if an actual owner's declaration and superseding bond has been filed in accordance with 19 CFR 141.20.

(4) The transferee, if the right to draw merchandise in a bonded warehouse has been transferred in accordance with subpart C of 19 CFR Part 144. For the purpose of this definition, the customs territory of the U.S. consists of the 50 states, Puerto Rico, and the District of Columbia.

(f) "Known to or reasonably ascertainable by" means all information in a person's possession or control, plus all information that a reasonable person might be expected to possess, control, or know, or could obtain without unreasonable burden or cost.

(g) "Manufacture for commercial purposes" means to import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer and includes, among other things, such "manufacture" of any amount of a chemical substance or mixture:

(1) For commercial distribution, including for test marketing, and

(2) For use by the manufacturer, including use for product research and development, or as an intermediate. "Manufacture for commercial purposes" also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including both byproducts and coproducts that are separated from that other substance or mixture, and impurities that remain in that substance or mixture. Byproducts and impurities may not in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose.

(h) "Miner of asbestos" is a person who produces asbestos by mining or extracting asbestos-containing ore so that it may be further milled to produce bulk asbestos for distribution in commerce, and includes persons who conduct milling operations to produce bulk asbestos by processing asbestos-containing ore. Milling involves the separation of the fibers from the ore, grading and sorting the fibers, or fiberizing crude asbestos ore. To mine or mill is to "manufacture" for commercial purposes under TSCA.

(i) "Person" means any natural person, firm, company, corporation, joint venture, partnership, sole proprietorship, association, or any other business entity, any State or political subdivision thereof, any municipality, any interstate body, and any department, agency, or instrumentality of the Federal Government.

(j) "Primary processor of asbestos" is a person who processes for commercial purposes bulk asbestos.

(k) "Process for commercial purposes" means the preparation of a chemical substance or mixture, after
its manufacture, for distributic
commerce with the purpose of ol
ing an immediate or eventual com
cial advantage for the processor.
essing of any amount of a che
substance or mixture is included
chemical or mixture containing i
rities is processed for commercial
poses, then those impurities are
processed for commercial purpose

(l) "Secondary processor of asbe
is a person who processes for com
cial purposes an asbestos mixture.

(m) "Site" means a contiguous
erty unit. Property divided only
public right-of-way shall be consic
one site. There may be more thar
manufacturing plant on a single si

(n) "Small manufacturer, proce
or importer" means a manufactur
processor who employed no more
10 full-time employees at any one
in 1981.

§ 763.65 Who must report.

(a) Persons who were miners or
mary processors of asbestos, or im
ers of bulk asbestos in 1981 must
plete and submit a separate EPA F
7710-36, Reporting Commercial
Industrial Use of Asbestos
§ 763.76), for each site and for
company activity not elsewhere
ported, according to the schedul
§ 763.71. When two or more per
meet the definition of "importer"
the same shipment, the principa
the transaction, not his agent
agents, shall report.

(b) Persons who were second
processors of asbestos in 1981
complete and submit Parts I and I
EPA Form 7710-37, Reporting Sec
ary Processing and Importation of
bestos Mixtures (see § 763.77), for e
site or activity, according to the sc
ule in § 763.71.

(c) Persons who were importer
1981 of asbestos mixtures or arti
containing asbestos components
complete and submit Parts I and II
EPA Form 7710-37, Reporting Sec
ary Processing and Importation of
bestos Mixtures, according to
schedule in § 763.71. When two
more persons meet the definition
"importer" for the same shipment,

principal in the transaction, not his agent(s), shall report.

(d) Secondary processors of asbestos and importers of asbestos mixtures or articles containing asbestos components must complete and submit a single EPA Form 7710-36, Reporting Commercial and Industrial Use of Asbestos, according to the schedule in § 763.71(c), if selected for further reporting as described in § 763.71(c).

(e) Particular information required on EPA Form 7710-36 which has been previously submitted to the Consumer Product Safety Commission (CPSC) in accordance with a general order dated December 22, 1980 (45 FR 84384), may be referenced in the appropriate place on the form and need not be submitted unless the respondent has informed the CPSC of his objection to any sharing of the data with EPA. Information for 1981 which was not required by CPSC must be reported on the EPA forms.

(f) The following persons are not subject to §§ 763.65 and 763.71.

(1) Secondary processors of asbestos, to the extent that they process an asbestos mixture to repair articles, to construct buildings or other such construction activities, or to apply, assemble, install, erect, consume, or repackage the mixture without modification.

(2) Persons who are small manufacturers, processors, or importers, as defined in § 763.63(n).

§ 763.71 Schedule for reporting.

(a) All miners, primary processors, and importers of bulk asbestos subject to reporting under § 763.65(a) shall submit required data on EPA Form 7710-36 within 90 days after the effective date of this rule.

(b) All secondary processors and importers subject to reporting under § 763.65(b) and (c) shall submit required data on EPA Form 7710-37 within 60 days after the effective date of this rule.

(c) All persons subject to paragraph (b) of this section who are selected for additional reporting shall submit required data on EPA Form 7710-36 within 90 days after receipt of EPA notification to do so. Selections will be made in the following manner. The respondents will be selected using a stratified random sampling technique. First, qualified statisticians will review reports on EPA Form 7710-37 and determine the optimal method to stratify respondents according to the composition of the respondent population. The strata will be defined by all or an appropriate subset of the following variables: The end product; the asbestos mixture that is the starting material in the end product; the volume of the asbestos mixture annually consumed or imported. Respondents will be stratified into as few groups as reasonably possible. The size of the sample will be determined after all respondents have been stratified. EPA intends to require further reporting from the minimum number of respondents possible while still meeting the EPA needs for statistically sound data. If there are insufficient numbers of respondents in a group to perform a statistically sound sample survey, then all of the respondents in that group may be required to complete EPA Form 7710-36. A standard random selection technique will be employed to select persons who will be required to complete and submit EPA Form 7710-36. Notification shall be sent by certified letter, signed by the Office Director, Office of Toxic Substances, and will have attached copies of this rule and EPA Form 7710-36. Letters of notification will be sent by EPA no later than three years after the effective date of this rule.

(d) EPA Form 7710-36 and EPA Form 7710-37 can be obtained by writing or telephoning:

Industry Assistance Office, Office of Pesticides and Toxic Substances (TS-799), Washington, DC 20460, Toll free: (800-424-9065), In Washington call: (554-1404).

(e) Completed forms must be mailed to: U.S. Environmental Protection Agency, Post Office Box 2070, Rockville, MD. 20852.

§ 763.74 Confidential business information.

(a) Any person submitting a document under this rule may assert a business confidentiality claim covering all or part of the submitted material unless otherwise instructed on the reporting form. EPA will disclose information covered by a claim only as provided in procedures set forth in 40 CFR Part 2.

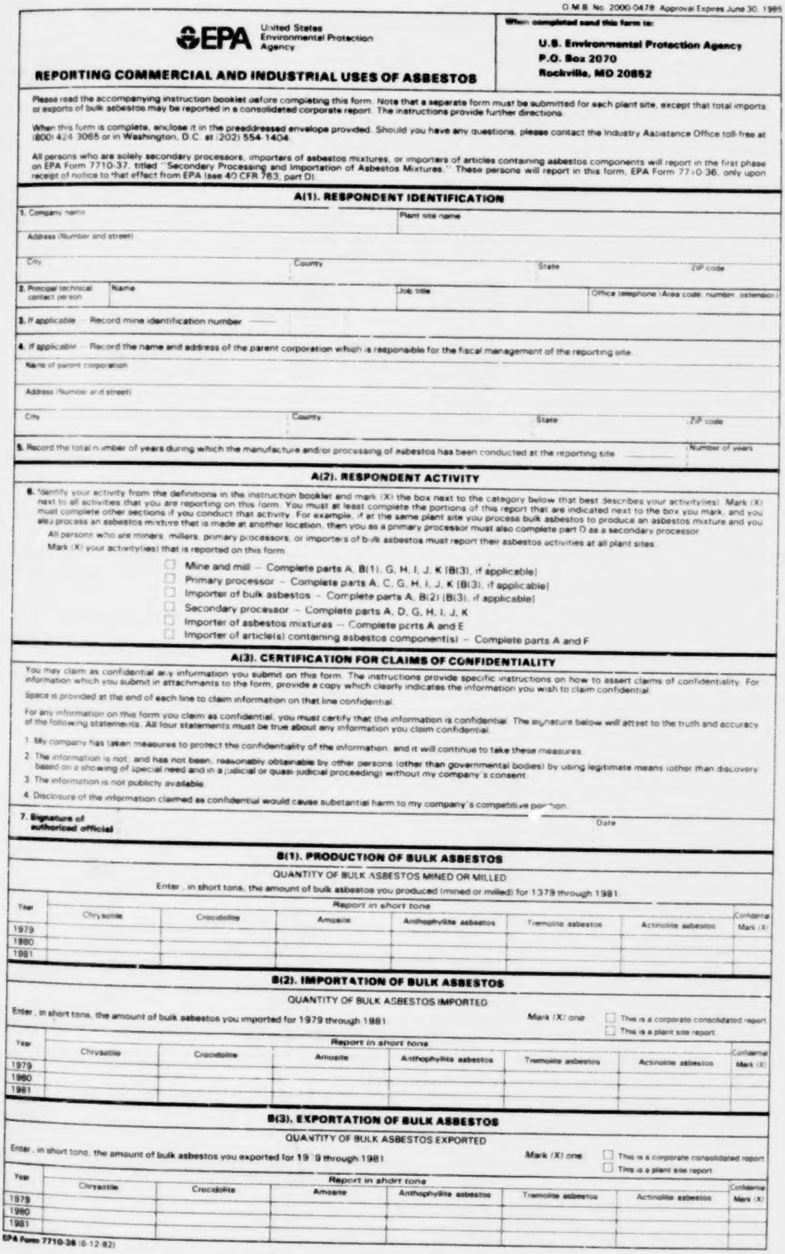
(b) Certification for a claim made on any item reported under § 763.65 must be made by signing the certification statement as specified in the forms.

(c) If no certified claim accompanies a document at the time it is submitted to EPA, the document may be placed in an open file available to the public without further notice to the respondent.

§ 763.76 Reporting commercial and industrial uses of asbestos.

The following EPA Form 7710-36, Reporting Commercial and Industrial Uses of Asbestos, will be completed and submitted to EPA as required in §§ 763.65 and 763.71. Information must be reported on this form to the extent that it is known to or reasonably ascertainable by the respondent, except for importers. Importers must report information on this form to the extent that it is in the possession of the respondent.

(a) EPA Form 7710-36 (5-80).



O.M.B. No. 2000-0478. Approval Expires June 30, 1985

United States
Environmental Protection
Agency

REPORTING COMMERCIAL AND INDUSTRIAL USES OF ASBESTOS

When completed send this form to:

U.S. Environmental Protection Agency
P.O. Box 2070
Rockville, MD 20852

Please read the accompanying instruction booklet before completing this form. Note that a separate form must be submitted for each plant site, except that total imports or exports of bulk asbestos may be reported in a consolidated corporate report. The instructions provide further directions.

When this form is complete, enclose it in the preaddressed envelope provided. Should you have any questions, please contact the Industry Assistance Office toll-free at (800) 424-3065 or in Washington, D.C. at (202) 554-1404.

All persons who are solely secondary processors, importers of asbestos mixtures, or importers of articles containing asbestos components will report in the first phase on EPA Form 7710-37, titled "Secondary Processing and Importation of Asbestos Mixtures." These persons will report in this form, EPA Form 7710-36, only upon receipt of notice to that effect from EPA (see 40 CFR 763, part D).

A(1). RESPONDENT IDENTIFICATION

1. Company name
Plant site name
Address (Number and street)
City
County
State
ZIP code

2. Principal technical contact person
Name
Job title
Office telephone (Area code, number, extension)

3. *If applicable* — Record mine identification number ——

4. *If applicable* — Record the name and address of the parent corporation which is responsible for the fiscal management of the reporting site.
Name of parent corporation
Address (Number and street)
City
County
State
ZIP code

5. Record the total number of years during which the manufacture and/or processing of asbestos has been conducted at the reporting site ——
Number of years

A(2). RESPONDENT ACTIVITY

6. Identify your activity from the definitions in the instruction booklet and mark (X) the box next to the category below that best describes your activity(ies). Mark (X) next to all activities that you are reporting on this form. You must at least complete the portions of this report that are indicated next to the box you mark, and you must complete other sections if you conduct that activity. For example, if at the same plant site you process bulk asbestos to produce an asbestos mixture and you also process an asbestos mixture that is made at another location, then you as a primary processor must also complete part D as a secondary processor.

All persons who are miners, millers, primary processors, or importers of bulk asbestos must report their asbestos activities at all plant sites.

Mark (X) your activity(ies) that is reported on this form.

- ☐ Mine and mill — Complete parts A, B(1), G, H, I, J, K (B(3), if applicable)
- ☐ Primary processor — Complete parts A, C, G, H, I, J, K (B(3), if applicable)
- ☐ Importer of bulk asbestos — Complete parts A, B(2) (B(3), if applicable)
- ☐ Secondary processor — Complete parts A, D, G, H, I, J, K
- ☐ Importer of asbestos mixtures — Complete parts A and E
- ☐ Importer of article(s) containing asbestos component(s) — Complete parts A and F

A(3). CERTIFICATION FOR CLAIMS OF CONFIDENTIALITY

You may claim as confidential any information you submit on this form. The instructions provide specific instructions on how to assert claims of confidentiality. For information which you submit in attachments to the form, provide a copy which clearly indicates the information you wish to claim confidential.

Space is provided at the end of each line to claim information on that line confidential.

For any information on this form you claim as confidential, you must certify that the information is confidential. The signature below will attest to the truth and accuracy of the following statements. All four statements must be true about any information you claim confidential.

1. My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures.
2. The information is not, and has not been, reasonably obtainable by other persons (other than governmental bodies) by using legitimate means (other than discovery based on a showing of special need and in a judicial or quasi-judicial proceeding) without my company's consent.
3. The information is not publicly available.
4. Disclosure of the information claimed as confidential would cause substantial harm to my company's competitive position.

7. **Signature of authorized official**
Date

B(1). PRODUCTION OF BULK ASBESTOS

QUANTITY OF BULK ASBESTOS MINED OR MILLED

Enter, in short tons, the amount of bulk asbestos you produced (mined or milled) for 1979 through 1981.

Year	*Report in short tons*						Confidential Mark (X)
	Chrysotile	Crocidolite	Amosite	Anthophyllite asbestos	Tremolite asbestos	Actinolite asbestos	
1979							
1980							
1981							

B(2). IMPORTATION OF BULK ASBESTOS

QUANTITY OF BULK ASBESTOS IMPORTED

Enter, in short tons, the amount of bulk asbestos you imported for 1979 through 1981.

Mark (X) one
☐ This is a corporate consolidated report
☐ This is a plant site report

Year	*Report in short tons*						Confidential Mark (X)
	Chrysotile	Crocidolite	Amosite	Anthophyllite asbestos	Tremolite asbestos	Actinolite asbestos	
1979							
1980							
1981							

B(3). EXPORTATION OF BULK ASBESTOS

QUANTITY OF BULK ASBESTOS EXPORTED

Enter, in short tons, the amount of bulk asbestos you exported for 1979 through 1981.

Mark (X) one
☐ This is a corporate consolidated report
☐ This is a plant site report

Year	*Report in short tons*						Confidential Mark (X)
	Chrysotile	Crocidolite	Amosite	Anthophyllite asbestos	Tremolite asbestos	Actinolite asbestos	
1979							
1980							
1981							

EPA Form 7710-36 (6-12-82)

C. PRIMARY PROCESSOR PRODUCTION

Enter the following information for each type of end product that you shipped from your plant site. Classify your end products according to the list below.

End product shipped (Enter one end product per line) (1)		Type of asbestos fiber (Use one line per mineral type) (2)	Year	Quantity of asbestos consumed (Short tons) (3)	Product shipments				Confidential item (X)
					Total annual production (4)		Value shipped (Thousands of dollars) (5)		
Code number	Generic name				Quantity	Unit of measure	Domestic	Exports	
		☐ Chrysotile ☐ Anthophyllite	1979						
		☐ Crocidolite ☐ Tremolite	1980						
		☐ Amosite ☐ Actinolite	1981						
		☐ Chrysotile ☐ Anthophyllite	1979						
		☐ Crocidolite ☐ Tremolite	1980						
	☐ Continued	☐ Amosite ☐ Actinolite	1981						
		☐ Chrysotile ☐ Anthophyllite	1979						
		☐ Crocidolite ☐ Tremolite	1980						
	☐ Continued	☐ Amosite ☐ Actinolite	1981						

(6) Estimate the percentage of the total value shipped from the plant site reported here as primary processor production in 1981 ________ %

Asbestos Mixture Product Subcategories

Papers, felts, or related products	Unit of measure
01. Commercial paper	Short tons
02. Rollboard	Short tons
03. Millboard	Short tons
04. Pipeline wrap	Short tons
05. Beater add gasketing paper	Short tons
06. High grade electrical paper	Short tons
07. Unsaturated roofing felt	Short tons
08. Saturated roofing felt	Short tons
09. Flooring felt	Short tons
10. Corrugated paper	Short tons
11. Specialty paper *(Specify generic name)*	Short tons
Floor coverings	
12. Vinyl asbestos floor tile	Square yards
13. Asbestos felt-backed vinyl flooring	Square yards

Asbestos-cement products	Unit of measure
14. A/C pipe and fittings	Short tons
15. A/C sheet, flat	100 sq. ft
16. A/C sheet, corrugated	100 sq. ft
17. A/C shingle	Squares
Friction materials	
18. Drum brake lining (light medium vehicle)	Pieces
19. Disc brake pads (light medium vehicle)	Pieces
20. Disc brake pads (heavy vehicle)	Pieces
21. Brake block (heavy equipment)	Pieces
22. Clutch facings (all)	Pieces
23. Automatic transmission friction components	Pieces
24. Friction materials (industrial and commercial)	Pieces

Textiles	Unit of measure
25. Cloth	Pounds
26. Thread, yarn, lap, roving, cord, rope, or wick	Pounds
Other products	
27. Sheet gasketing (other than beater add)	Sq. yards
28. Packing	Pounds
29. Paints and surface coatings	Gallons
30. Adhesives and sealants	Gallons
31. Asbestos reinforced plastics	Pounds
32. Insulation materials not elsewhere classified *(Specify generic name)*	(Specify)
33. Mixed or repackaged asbestos fiber	Short tons
34. Other *(Specify generic name)*	(specify)

D. SECONDARY PROCESSOR PRODUCTION

Enter the following information for each type of end product that you shipped from your plant site. Classify end products and asbestos mixtures consumed according to the lists on this form.

End product shipped (Enter one end product per line) (1)		Total annual production (2)			Asbestos mixture consumed and form (Enter one mixture per line) (3)		Function of asbestos in product (4)	Year	Annual consumption of asbestos mixtures (5)			Confidential item (X)
Code number	Generic name	Year	Quantity	Unit of measure	Code number	Generic name / Form			Quantity	Unit of measure	Delivered cost (Thousands of dollars)	
		1979						1979				
		1980						1980				
		1981						1981				
		1979						1979				
		1980						1980				
	☐ Continued	1981						1981				
		1979						1979				
		1980						1980				
	☐ Continued	1981						1981				

(6) Estimate the percentage of the total value shipped from the plant site reported here as secondary processor production in 1981 ________ %

Typical terms for products made from asbestos mixtures

Automotive and friction products
- **101.** Drum brake lining (light medium vehicle)
- **102.** Disc brake pads (light medium vehicle)
- **103.** Disc brake pads (heavy vehicle)
- **104.** Brake block (heavy equipment)
- **105.** Clutch facings (all)
- **106.** Automatic transmission friction components
- **107.** Friction materials (industrial and commercial)
- **108.** Custom automotive body filler
- **109.** Transmissions
- **110.** Mufflers
- **111.** Radiator top insulation
- **112.** Radiator sealant
- **113.** Other *(Specify generic name)*

Appliances
- **114.** Appliance, industrial and consumer *(Specify generic name)*

Construction products
- **115.** Boiler and furnace baffles
- **116.** Decorated building panels
- **117.** A/C sheet
- **118.** Flexible air conductor
- **119.** Hoods and vents
- **120.** Portable construction building
- **121.** Roofing, saturated
- **122.** Roof shingles
- **123.** Wallboard
- **124.** Wall/roofing panels
- **125.** Other *(Specify generic name)*

Clothing
- **126.** Aprons
- **127.** Boots
- **128.** Gloves and mittens
- **129.** Hats and helmets
- **130.** Overgaitors
- **131.** Suits
- **132.** Other *(Specify generic name)*

Floor coverings
- **133.** Vinyl asbestos floor tile
- **134.** Asbestos felt-backed sheet vinyl flooring

Electrical products and components
- **135.** Cable insulation
- **136.** Electronic motor components
- **137.** Electrical resistance supports
- **138.** Electrical switchboard
- **139.** Electrical switch supports
- **140.** Electrical wire insulation
- **141.** Motor armature
- **142.** Other *(Specify generic name)*

Fire and heat shielding equipment and components
- **143.** Arc deflectors
- **144.** Fire doors
- **145.** Fireproof absorbent paper
- **146.** Heat shields
- **147.** Molten metal handling equipment
- **148.** Oven and stove insulation
- **149.** Pipe wrap
- **150.** Stove lining, wood and coal
- **151.** Stove pipe rings
- **152.** Sleeves
- **153.** Thermal insulation
- **154.** Other *(Specify generic name)*

Gaskets
- **155.** Sheet gasketing, rubber encapsulated beater addition
- **156.** Sheet gasketing, rubber encapsulated compressed
- **157.** Compressed sheet gasketing (other)
- **158.** Metal reinforced gaskets
- **159.** Automotive gaskets
- **160.** Other *(Specify generic name)*

Marine equipment and supplies
- **161.** Caulks, marine
- **162.** Liners, pond or canal
- **163.** Marine bulkheads
- **164.** Other *(Specify generic name)*

Paints, coatings, sealants, and compounds
- **165.** Asphaltic compounds
- **166.** Automotive/truck body coatings
- **167.** Buffing and polishing compounds
- **168.** Caulking and patching compounds
- **169.** Drilling fluid
- **170.** Flashing compounds
- **171.** Furnace cement
- **172.** Glazing compounds
- **173.** Plaster and stucco
- **174.** Pump, valve, flange, and tank sealing components
- **175.** Roof coatings
- **176.** Textured paints
- **177.** Tile cement
- **178.** Other *(Specify generic name)*

Textile and felt products
- **179.** Aluminized cloth
- **180.** Rope or braiding
- **181.** Yarn, lap, or roving
- **182.** Wicks
- **183.** Bags
- **184.** Belting
- **185.** Blankets
- **186.** Carpet padding
- **187.** Commercial/industrial dryer felts
- **188.** Draperies
- **189.** Drip cloths
- **190.** Fire hoses

Textile and felt products — Con.
- **191.** Ironing board pads and insulation
- **192.** Mantles, lamp or catalytic heater
- **193.** Packing and packing components
- **194.** Piano and organ felts
- **195.** Rugs
- **196.** Tape
- **197.** Theater curtains
- **198.** Umbrellas
- **199.** Other *(Specify generic name)*

Miscellaneous products
- **200.** Aerial distress flares
- **201.** Acoustical products
- **202.** Ammunition wadding
- **203.** Asbestos reinforced plastic products
- **204.** Ash trays
- **205.** Baking sheets
- **206.** Blackboards
- **207.** Candlesticks
- **208.** Chemical tanks and vessels
- **209.** Filters
- **210.** Grommets
- **211.** Gun grips
- **212.** Jewelry making equipment
- **213.** Kilns
- **214.** Lamp sockets
- **215.** Light bulbs (all types)
- **216.** Linings for vaults, safes, humidifiers, and filing cabinets
- **217.** Phonograph records
- **218.** Pottery clay
- **219.** Welding rod coatings
- **220.** Other *(Specify generic name)*

E. IMPORTATION OF ASBESTOS MIXTURES

Enter the following information for each type of asbestos mixture that you imported in 1981. Classify your imports according to the lists in section C or D.

Asbestos mixtures (Enter one mixture per line) (1)		Asbestos fiber content (if known) (2)		Year	Total annual imports (3)			Confidential item (X)
Code number	Generic name	Type of asbestos	Quantity (Per unit)		Quantity	Unit of measure	Value of imports (U.S. dollars)	
		☐ Chrysotile ☐ Anthophyllite ☐ Unknown		1979				
		☐ Crocidolite ☐ Tremolite		1980				
		☐ Amosite ☐ Actinolite	☐ Unknown	1981				
		☐ Chrysotile ☐ Anthophyllite ☐ Unknown		1979				
		☐ Crocidolite ☐ Tremolite		1980				
	☐ Continued	☐ Amosite ☐ Actinolite	☐ Unknown	1981				
		☐ Chrysotile ☐ Anthophyllite ☐ Unknown		1979				
		☐ Crocidolite ☐ Tremolite		1980				
	☐ Continued	☐ Amosite ☐ Actinolite	☐ Unknown	1981				

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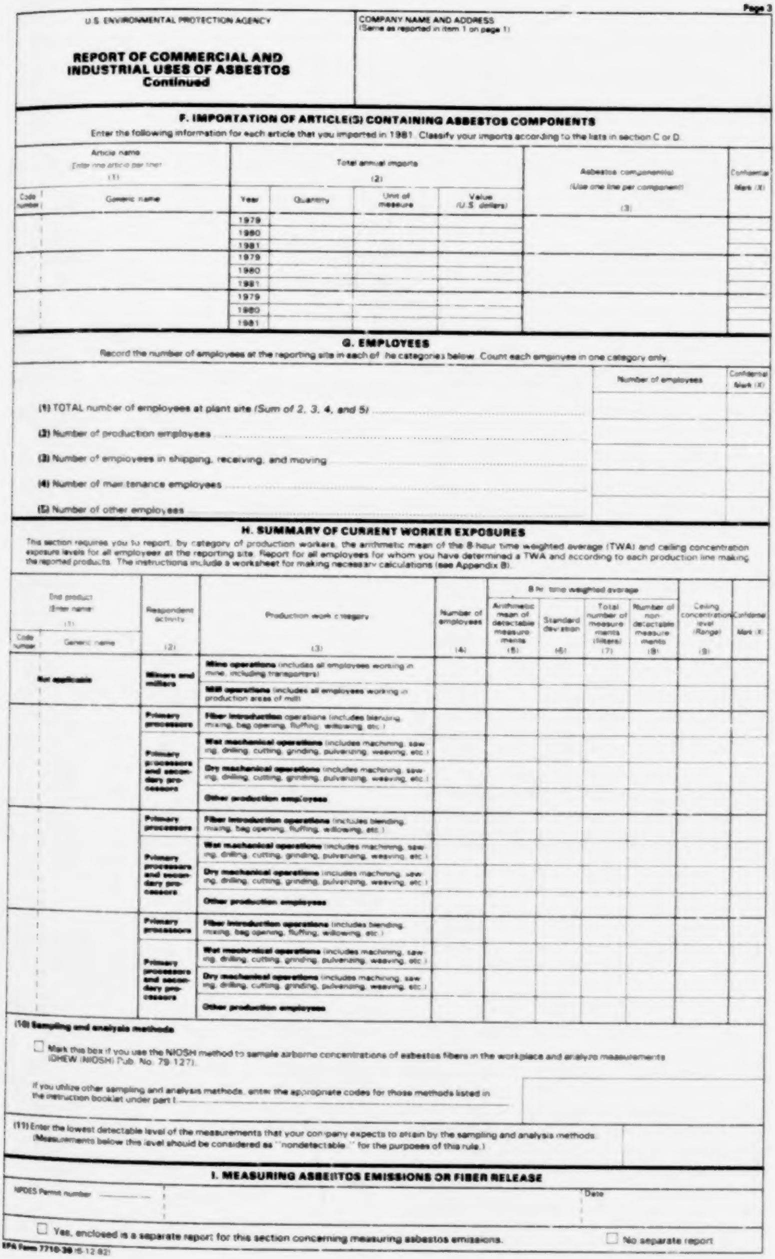

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U.S. ENVIRONMENTAL PROTECTION AGENCY

REPORT OF COMMERCIAL AND INDUSTRIAL USES OF ASBESTOS
Continued

COMPANY NAME AND ADDRESS
(Same as reported in item 1 on page 1)

F. IMPORTATION OF ARTICLE(S) CONTAINING ASBESTOS COMPONENTS

Enter the following information for each article that you imported in 1981. Classify your imports according to the lists in section C or D.

Article name (Enter one article per line) (1)		Total annual imports (2)				Asbestos component(s) (Use one line per component) (3)	Confidential Mark (X)
Code number	Generic name	Year	Quantity	Unit of measure	Value (U.S. dollars)		
		1979					
		1980					
		1981					
		1979					
		1980					
		1981					
		1979					
		1980					
		1981					

G. EMPLOYEES

Record the number of employees at the reporting site in each of the categories below. Count each employee in one category only.

	Number of employees	Confidential Mark (X)
(1) TOTAL number of employees at plant site *(Sum of 2, 3, 4, and 5)*		
(2) Number of production employees		
(3) Number of employees in shipping, receiving, and moving		
(4) Number of maintenance employees		
(5) Number of other employees		

H. SUMMARY OF CURRENT WORKER EXPOSURES

This section requires you to report, by category of production workers, the arithmetic mean of the 8-hour time weighted average (TWA) and ceiling concentration exposure levels for all employees at the reporting site. Report for all employees for whom you have determined a TWA and according to each production line making the reported products. The instructions include a worksheet for making necessary calculations (see Appendix B).

End product (Enter name) (1)		Respondent activity (2)	Production work category (3)	Number of employees (4)	8-hr. time weighted average				Ceiling concentration level (Range) (9)	Confidential Mark (X)
Code number	Generic name				Arithmetic mean of detectable measurements (5)	Standard deviation (6)	Total number of measurements (filters) (7)	Number of non-detectable measurements (8)		
	Not applicable	**Miners and millers**	**Mine operations** (includes all employees working in mine, including transporters)							
			Mill operations (includes all employees working in production areas of mill)							
		Primary processors	**Fiber introduction** operations (includes blending, mixing, bag opening, fluffing, willowing, etc.)							
		Primary processors and secondary processors	**Wet mechanical operations** (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Dry mechanical operations (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Other production employees							
		Primary processors	**Fiber introduction operations** (includes blending, mixing, bag opening, fluffing, willowing, etc.)							
		Primary processors and secondary processors	**Wet mechanical operations** (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Dry mechanical operations (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Other production employees							
		Primary processors	**Fiber introduction operations** (includes blending, mixing, bag opening, fluffing, willowing, etc.)							
		Primary processors and secondary processors	**Wet mechanical operations** (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Dry mechanical operations (includes machining, sawing, drilling, cutting, grinding, pulverizing, weaving, etc.)							
			Other production employees							

(10) Sampling and analysis methods

☐ Mark this box if you use the NIOSH method to sample airborne concentrations of asbestos fibers in the workplace and analyze measurements (DHEW (NIOSH) Pub. No. 79-127).

If you utilize other sampling and analysis methods, enter the appropriate codes for those methods listed in the instruction booklet under part I ____________

(11) Enter the lowest detectable level of the measurements that your company expects to attain by the sampling and analysis methods. (Measurements below this level should be considered as "nondetectable." for the purposes of this rule.)

I. MEASURING ASBESTOS EMISSIONS OR FIBER RELEASE

NPDES Permit number ________

Date

☐ Yes, enclosed is a separate report for this section concerning measuring asbestos emissions. ☐ No separate report

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J. WASTE AND DISPOSAL

Enter the following information for each end product you report in section B(1), C, and D. If you cannot provide information by end product, provide information according to the form of waste (column 2)

End product (1)		Form of waste (sludge, slurry, broke or scrap, baghouse fines, or specify other)	Total annual quantity of asbestos waste (Short tons)	Average percent asbestos	Disposal site (5)				Method of disposal	Contam-
Code number	Generic name	(2)	(3)	(4)	Type of land disposal facility (See instructions) (a)	Location (b)	Ownership (c)	Permitted hazardous waste facility? (d)	(6)	
	☐ End product report ☐ Form of waste report			%	☐ Surface impoundment ☐ Waste pile ☐ Land treatment ☐ Land fill ☐ Seepage facility ☐ Injection well	☐ On-site ☐ Off-site	☐ Company ☐ Private ☐ Municipal	☐ Yes ☐ No		
	☐ End product report ☐ Form of waste report			%	☐ Surface impoundment ☐ Waste pile ☐ Land treatment ☐ Land fill ☐ Seepage facility ☐ Injection well	☐ On-site ☐ Off-site	☐ Company ☐ Private ☐ Municipal	☐ Yes ☐ No		
	☐ End product report ☐ Form of waste report			%	☐ Surface impoundment ☐ Waste pile ☐ Land treatment ☐ Land fill ☐ Seepage facility ☐ Injection well	☐ On-site ☐ Off-site	☐ Company ☐ Private ☐ Municipal	☐ Yes ☐ No		

(7) You may describe in a separate enclosure any steps you take to ensure that waste does not release airborne fibers

☐ Yes, enclosed is a separate description of waste disposal practices ☐ No separate report

K. POLLUTION CONTROL EQUIPMENT

On separate lines enter information about each piece of air pollution control equipment used to control asbestos emissions at your plant site ☐ Contd.

Item number (1)	Type of equipment (See code) (2)	Gas stream volume and temperature (3)	Equipment size (Baghouse and ESP only) (4)	Estimated collection efficiency (Percent) (5)	Normal operating schedule (Hrs./year) (6)	Quantity collected annually (Pounds) (7)	Source of emissions (8)	Stack or chimney? (9)	Special problems? (10)
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	
		Volume Temperature	Square feet ☐ N/A	% ☐ Designed ☐ Actual	Hrs./yr.	Pounds ☐ Designed ☐ Actual		☐ Yes ☐ No	

(11) Estimate the percent of plant exhaust air that is treated by the equipment listed above ______ %

Continuation of item answers

EPA Form 7710-36 (6-12-82)

INSTRUCTION BOOKLET—REPORTING COMMERCIAL AND INDUSTRIAL USES OF ASBESTOS, EPA FORM 7710-36

I. Introduction and Reporting Schedule

A. Introduction

These instructions are for companies that mine and/or mill commercial asbestos, or process or import an asbestos product, and are required to submit EPA Form 7710-36 under 40 CFR Part 763, subpart D. Data must be reported to the extent that they are known to or reasonably ascertainable by the submitter based on factual information that either is available in company files, or can be obtained without unreasonable burden or cost. Importers must report information in their possession, but need not contact foreign manufacturers for missing information.

1. *Fill in all blocks.* Fill in all blocks in the portions of the form that must be completed. Write "N/A" (not applicable) in large, bold letters on the first line of any section that does not have to be completed.

If data for a portion of the form that must be completed are not available, consult part II of these instructions, "Missing Information."

EPA will check all forms for completeness. Incomplete forms may be returned for completion. If only a few items are incomplete, EPA may call the designated Technical Contact to determine the correct answer rather than return the form.

2. *Relevant definitions.* Reporting requirements are determined by the company's asbestos activity in 1981 (i.e., miner and/or miller, importer of bulk asbestos, primary processor of asbestos, secondary processor of asbestos, importer of asbestos mixtures, or importer of articles containing asbestos components). Definitions for reporting activities and other terms used in this form may be found in Appendix A.

3. *Appropriate number of forms.* A separate form must be submitted for each *site.* For example, a miner and/or miller at one site who is a primary processor at a different site must submit a form for each site.

All asbestos activities conducted at each site must be reported. A primary processor who also imports asbestos at a single site must report both the primary processing and importing activities on the same form.

4. *Additional space.* If additional space is needed to report all required information, responses can be entered on a reproduction of the pertinent portion of the form and the continuation should be noted on that part of the form.

B. Portions of the Form To Complete and Reporting Schedule

1. *Miners and/or millers.* Miners and/or millers must complete parts A, B(1), G, H, I, J, and K of the form. Complete B(3) if applicable. Report for each plant site on a separate EPA Form 7710-36 and submit within 90 days of the effective date of the rule.

2. *Primary processors of asbestos.* Primary processors must complete parts A, C, G, H, I, J, and K of the form. Complete B(3) if applicable. If a facility processes an asbestos mixture that is made at a different plant site, part D must also be completed. Report for each plant site on a separate EPA Form 7710-36 within 90 days of the effective date of the rule.

3. *Secondary processors of asbestos.* Persons who are *solely* secondary processors must submit EPA Form 7710-37, "Reporting Secondary Processing and Importation of Asbestos Mixtures" within 60 days of the effective date of the rule. If the company is selected and notified by certified letter to complete EPA Form 7710-36, complete parts A, D, G, H, I, J, and K of the form for submission within 90 days of receiving notification.

4. *Importers of bulk asbestos.* Importers of Bulk Asbestos must complete *at least* parts A and B(2) of the form. Complete B(3) if applicable. Report all activities that involve asbestos on EPA Form 7710-36 within 90 days of the effective date of the rule.

5. *Importers of asbestos mixtures.* Importers of Asbestos Mixtures must submit EPA Form 7710-37 "Reporting Secondary Processing and Importation of Asbestos Mixtures," within 60 days of the effective date of the rule. If the company is selected and notified by certified letter to complete EPA Form 7710-36, complete parts A and E of the form and submit within 90 days of receiving notification.

6. *Importers of article(s) containing asbestos component(s).* Importers of Article(s) Containing Asbestos Component(s) must submit EPA Form 7710-37 "Reporting Secondary Processing and Importation of Asbestos Mixtures," within 60 days of the effective date of the rule. If the company is selected and notified by certified letter to complete EPA Form 7710-36, complete parts A and F of the form and submit within 90 days of receiving notification.

II. Missing Information

It is important to fill in all blocks in the portions of the form that must be completed. If the required information either cannot or need not be provided, enter one of the notations described below. Write "N/A" (not applicable) in large bold letters on the first line of any section that is not required. Only use "0" to report a quantity of zero.

Enter the following notations if the requested data are unknown, previously submitted to EPA or CPSC, or submitted as a corporate report.

UNK—The requested data are *unknown* and not reasonably ascertainable; or, not in the possession of the importer. This may be the case for information from a specific year or about a specific type of data that is required.

CPSC—The requested data have been previously reported to the Consumer Product Safety Commission (CPSC) in response to the December 22, 1980 FEDERAL REGISTER notice "Consumer Product Containing Asbestos; General Order for Submission of Information," (45 FR 84384). Use this notation only for the specific items of information that were submitted to CPSC. *Do not* use this notation in lieu of reporting of CPSC was instructed not to share the submitted information with EPA at the time of response to the CPSC General Order.

CORP—The requested data have been submitted for sections B(2) and B(3) (importation and exportation), in a corporate consolidated report. Inform the plant site management that a corporate consolidated report has been submitted and instruct those plant site(s) to enter "CORP" in sections B(2) and B(3).

EPA—The requested data have already been submitted to EPA in the format of the reporting form as proposed or promulgated.

III. Specific Instructions for Form 7710-36

A(1). Respondent Identification

1. Enter company name, and name and complete address of plant site.

2. Enter name, job title, and telephone number of the principal technical contact person to be contacted by the EPA for answers to any questions about the submitted form.

3. Miners must record the mine identification number assigned by the Mining Safety and Health Administration.

4. Enter name and address of the parent corporation responsible for fiscal management of the reporting site.

5. Enter the total number of years asbestos has been manufactured or processed at this plant site, through the date of this report.

A(2). Respondent Activity

Review the definitions in Appendix A of these instructions to ascertain required reporting activity(ies). Check the appropriate activity(ies) that is performed at this site. Complete the portions of the form listed next to the activities checked.

For example, a primary processor who makes an asbestos mixture and then processes the asbestos mixture at the same site to make a different end product should report the production of the final end product in part C. Only complete part D of the form if the facility processes an asbestos mixture that is made elsewhere.

A(3). Confidential Business Information

Any reported information may be claimed as confidential business information. When submitting the form, mark (X) in the space provided on each line of the form that contains confidential information. Additionally, an authorized company official must sign the "Certification for Claims of Confidentiality" to certify that the four statements on the form apply to all information claimed as confidential.

B(1). Production of Bulk Asbestos

Enter, in short tons, the amount of bulk asbestos produced (mined or milled), in 1979, 1980, and 1981.

B(2). Importation of Bulk Asbestos

Enter, in short tons, the amount of bulk asbestos imported in 1979, 1980, and 1981. Report all imports entering the U.S. Customs territory that are declared under Tariff Schedule of the United States, Annotated (TSUSA) Number 518.1110-518.1160. Mark in the appropria'e box the source of this information.

B(3). Exportation of Bulk Asbestos

Enter, in short tons, the amount of bulk abestos exported in 1979, 1980, and 1981. Mark in the appropriate box the source of this information.

C. Primary Processor Production

Individually list the product subcategories made and shipped from the plant site in 1979, 1980, and 1981 that incorporate bulk abestos as a starting material. Read instructions for items 1, 2, and 3 before completing this section to ensure sufficient space for entries.

(1) *End Product Shipped.* Locate on the list of "Asbestos Mixture Product Subcategories" the most specific name that describes the end product(s) shipped from the plant site. Enter the corresponding code number for each product subcategory being reported. If the listed product subcategory name is not adequately descriptive, write in a generic name next to the code number. If the product is not listed, write in the appropriate code for "other" and a generic name for the product. *Do not* enter a trade name as a generic name. Do not report anything more specific than a product subcategory.

(2) *Type of Asbestos Fiber Consumed.* Mark (X) the fiber type(s) that is, or has been, used in production of reported product subcategory. Use one block for each fiber type incorporated into each product subcategory. If more than one type of fiber(s) is used for a product, mark (X) the

ditional fiber in the next block and mark
) the continuation box in column 1. *Do*
t list the same product subcategory twice.
3) *Quantity of Asbestos Consumed.* For
ch type of asbestos, enter, in short tons,
antity consumed in 1979, 1980, and 1981.
4) *Total Annual Production.* Record the
al annual production quantity of each re-
rted product subcategory in 1979, 1980,
d 1981. Production quantities will be ex-
essed in the units of measure indicated on
e form next to the listed end product, as
d by the Bureau of Census. If census
ts are not applicable, report production
short tons.

5) *Value Shipped.* Record the total
nual value shipped (in thousands of U.S.
llars) for each reported product subcate-
y in 1979, 1980, and 1981. These figures
st be separated to show domestic sales
d export sales (i.e., sales distributed out-
e the U.S. Customs Territory). If the
akdown is unknown, report total sales as
omestic" sales, and write "UNK" under
xports."

he valuation of products shipped should
based on the net selling value, f.o.b.
nt, after discounts and allowances, and
lusive of freight charges and excise
es.

Vhen reporting products transferred to
er establishments within the same com-
y, the shipping plant should assign the
economic value to the transferred prod-
s. Include *all* direct costs of production
a reasonable proportion of all other
s and profits.

) *Percentage of Total Value Shipped.* Es-
ate the percentage of end products
pped that reflect primary processing of
estos in 1981.

D. Secondary Processor Production

dividually list the product subcategories
le and shipped from the plant site in
, 1980, and 1981 that incorporated an
estos mixture as a starting material.
d the instructions for items 1, 2, and 3
re completing this section to ensure suf-
nt space for entries.

) *End Product Shipped.* Locate on the
of "Typical Terms for Products Made
n Asbestos Mixtures" the most specific
ategory name that describes the prod-
Enter the corresponding code number
each product subcategory being report-
If the product name listed is not ade-
ely descriptive, write in a generic name
to the code number. If the product is
listed, enter the appropriate code for
er" and write in a generic name for the
uct. *Do not* enter a trade name as a ge-
c name. Do not report anything more
ific than a product subcategory.

Total Annual Production (Quantity by
us Unit of Measure). Record the total
uction of the reported product subcate-

gory at this plant site in 1979, 1980, and 1981. Production quantities should be reported in the unit of measure used by the U.S. Department of Commerce, Bureau of the Census, for the 1977 Census of Manufacturers.

(3) *Asbestos Mixture Consumed and Form.* Locate and enter from the list of "Asbestos Mixture Product Subcategories" the code number of the asbestos mixture processed to produce the product subcategory. If the material processed is not listed, then enter the appropriate code for "other" and write the generic name of the asbestos material you process. Indicate the form in which the asbestos starting material is purchased (e.g., roll of paper, 3′x5′ sheets, reams of 8″x11″ sheets).

Use one block for each asbestos mixture incorporated into the product subcategory. If there is more than one asbestos mixture per product subcategory, list the mixture(s) in the next block(s) and mark (**X**) the continuation box in column 1. *Do not* list the same product subcategory twice.

(4) *Function of the Asbestos in Product.* Briefly describe the function of the asbestos in the product. Examples of possible asbestos functions are: Rot resistance, heat insulation, fire shield, electrical insulation, dimensional stability, filler, or tensile strength.

(5) *Annual Consumption of Asbestos Mixtures.* Record the total annual quantity and specify Census Bureau unit of measure and the total annual cost (in thousands of U.S. dollars) of the asbestos mixtures consumed in 1979, 1980, and 1981.

The value of the materials consumed should be based on the delivered cost, i.e., the *amount paid or payable* after discounts and including freight and other direct charges incurred in acquiring the materials. Charges include purchases, transfers from other establishments of the company, and withdrawals from inventories.

Materials transferred to the plant site from other plants within the company should be assigned their full economic value, as assigned by the shipping plant, plus cost of freight and handling charges.

(6) *Percentage of Total Value Shipped.* Estimate the percentage of end products shipped that reflect secondary processing of asbestos in 1981.

E. Importation of Asbestos Mixtures

Individually list the asbestos mixtures imported to the plant site in 1979, 1980, and 1981. Read the instructions for items 1, 2, and 3 before completing this section to ensure sufficient space for entries.

(1) *Asbestos Mixture.* Locate on the list of "Asbestos Mixture Product Subcategories" the most specific name that describes the mixture imported. Enter the corresponding

code number of each product subcategory being reported. If the name of the product subcategory is not adequately descriptive, write in a generic name next to the code number. If the imported product subcategory is not listed, enter the appropriate code for "other" and write in a generic name for the product. List each product subcategory on a separate line. *Do not* enter a trade name as a generic name. Do not report anything more specific than a product subcategory.

(2) *Asbestos Fiber Content.* Mark (X) the type of asbestos fiber in the imported asbestos mixture and enter the total quantity of asbestos per unit of the mixture (the unit used to report quantity imported). The quantity of asbestos should be reported in *pounds*. If these data are not available, mark (X) "UNK."

Use one block for each type of fiber that is in the imported mixture. If the mixture contains more than one type of asbestos fiber, list the additional fiber(s) in the next block(s) and note the continuation in column 1. *Do not* list the same mixture twice.

(3) *Total Annual Imports.* Record the total annual quantity of each listed product subcategory imported in 1979, 1980, and 1981.

Quantities will be expressed in the units of measure used by the U.S. Bureau of the Census or according to the unit used to report importation to the U.S. Customs Service.

Record the total annual value imported (U.S. dollars) for each product in 1979, 1980, and 1981. This figure can be drawn from the U.S. Customs Service entry forms as the "Entered Value in U.S. Dollars" or "Value."

F. Importation of Article(s) Containing Asbestos Component(s)

Individually list the articles containing an asbestos component that were imported in 1979, 1980, and 1981. Only report information relating to imported product subcategories listed under "Typical Terms for Products Made from Asbestos Mixtures." If the component was reported on EPA Form 7710-37 during Phase 1, use the same code(s) and generic name(s) as reported on that form. Read the instructions for items 1, 2, and 3 before completing this section to ensure sufficient space for entries.

(1) *Article Name.* Locate on the list of "Typical Terms for Products Made from Asbestos Mixtures" the most specific name that describes your product. If the listed product name does not adequately describe your product, write in a generic name next to the code number. List each product on a separate line. If the imported product is not listed, enter the appropriate code number for "other" and write in a generic name. ***Do not* enter a trade name as a generic name.**

(2) *Total Annual Imports.* Record the total number of units that were imported in 1979, 1980, and 1981. Quantities will be reported in the unit of measure that was used to declare the merchandise upon entry into the U.S. or by the U.S. Bureau of Census for the 1977 Census of Manufacturers. Enter the value of the imported merchandise in U.S. dollars.

(3) *Asbestos Component(s).* List all asbestos components contained in the imported article by name, or by describing the mixture making up the component. Use one block for each asbestos component. If the imported article contains more than one asbestos component, list the component in the next block and note the continuation in column 1. *Do not* list the same article twice.

G. Employees

Classify all employees as of January 1981 into the following categories. In items 2-5 COUNT EACH EMPLOYEE IN ONLY ONE CATEGORY. In this section, report numbers of individuals without regard to the number of hours worked.

(1) *Total Number of Employees.* Enter the total number of employees (the sum of items 2, 3, 4, and 5) who worked at the reporting plant site as of January 1981. If you employed seasonal workers in 1981, add the number of those workers to the total.

(2) *Number of Production Employees.* Enter the number of production employees who work in areas where ASBESTOS IS MANUFACTURED OR PROCESSED. Do not include plant site production employees who work in separate areas where no asbestos fiber or asbestos product is processed. This number must equal the total number of employees reported in Section H, for all product lines.

(3) *Number of Shipping, Receiving, and Moving Employees.* Enter the number of employees involved with shipping, receiving or moving asbestos fiber or asbestos-containing products.

(4) *Number of Maintenance Employees.* Enter the number of maintenance employees who perform maintenance tasks in work areas where asbestos fiber, asbestos products, or asbestos waste are processed, stored or moved.

(5) *Number of Other Employees.* Enter the number of other employees at the location that are not counted in items 2-4.

H. Summary of Current Worker Exposures

Report, by category of production workers, the arithmetic mean of the 8-hour time weighted average (TWA) exposure level for all employees at the reporting site for whom a TWA has been determined. Appendix B describes how to perform the calculations and includes a worksheet.

ummarize Only *Existing Monitoring Data;*
Additional Monitoring Is Not Required

Submit a single TWA value (arithmetic
ean) to summarize existing monitoring
ıta that will describe current exposure
vels that employees in general production
tegories may experience while working on
ch production line. Summarize and report
onitoring data separately for workers on
e production line for each end product
bcategory that has been reported as
ther "Primary Processor Production"
art C) or "Secondary Processor Produc-
on" (part D). Miners and millers, must
ovide a single, separate TWA value for
e mine and for the mill.

For each *End Product Subcategory,* ente
e number of workers who perform the
oduction operations listed below. Only
unt employees who were counted as pro-
ction workers in item 2 of part G of the
rm. Each employee is to be counted *only*
e time, in the operation and product line
at is the employee's primary assignment.

After grouping the 8-hour TWAs, follow
e detailed instructions in Appendix B to
d the mean, standard deviation, number
measurements, and ceiling ranges for
ch group.

NOTE: The sum of all production employ-
s listed in column 4 *must equal* the
mber of production employees entered in
m 2 of part G.

1) *End Product.* Primary or secondary
ocessors must enter the same code
mber(s) and generic name(s) they listed
part C or D of the form. Miners and/or
llers *do not* complete this block.

2) *Respondent Activity.* Determine appli-
ble category of activity.

3) *Production Work Category.* Divide pro-
ction employees into the Production
rk Categories for each end product sub-
egory. Count mine workers under *Mine*
erations and mill workers under *Mill Op-*
tions.

iber Introduction Operations are oper-
ons where bulk (raw) asbestos is mixed
h or added to a combination of other ma-
ials. Primary processors will list employ-
who handle bulk or raw abestos fiber.
ondary processors do not use bulk asbes-
as a starting material.

Vet Mechanical Operations are oper-
ons where asbestos fiber, asbestos mix-
es, or asbestos-containing materials are
ricated, modified, or altered, and the as-
tos component is wetted to reduce the re-
e of airborne asbestos fiber. This catego-
includes such activities as: machining,
ing, drilling, cutting, grinding, or pulver-
g. Count employees whose principal job
o control or work with the tool or ma-
nery performing the operation. Count all
estos textile workers involved with wet operations here, whether involved in spinning, twisting, or weaving operations.

Dry Mechanical Operations are operations where asbestos fiber, asbestos mixtures, or asbestos-containing materials are fabricated, modified, or altered without any intentional wetting of the material during the operation. This category includes activities such as: Machining, sawing, drilling, cutting, grinding, or pulverizing. Count employees whose principal job is to control or work with the tool or machinery performing the operation. Count all asbestos textile workers in dry operations here, whether involved in spinning, twisting, or weaving operations.

Other Production Employees are production employees involved in operations that require handling of asbestos fiber or materials in a manner not covered in the operations described in the other categories. This category will include workers who perform an operation that involves handling an asbestos mixture, such as bonding asbestos-felt-backing for vinyl sheet flooring or injecting asbestos-reinforced plastic into a mold. Other production workers who are to be counted in this category include (but are not limited to) employees who take products off a production line, assemble parts, oversee drying or rolling operations, or inspect, weigh, or package asbestos mixtures or asbestos-containing products.

(4) *Number of Employees.* Enter next to the appropriate job classification the number of employees working in jobs meeting the general descriptions provided. Count employees *only one time* and only under the job description that best describes their primary duties.

(5) *Arithmetic Mean of Detectable Measurements.* Locate monitoring data for any employees counted in column 4 and group those monitoring data according to the employee's general job classification. Determine the arithmetic mean of those detectable TWA values for each work category. Calculate the mean only to the nearest one-hundredth (e.g., 0.05). The arithmetic mean is the sum of the time-weighted averages divided by the number of time-weighted averages. (See Appendix B for instructions and worksheet for determining the arithmetic mean.) If there are no measurements for workers in a particular work category, write in "No measurements."

(6) *Standard Deviation.* Enter the standard deviation for each arithmetic mean you calculate in column 5. (See Appendix B for instructions and a worksheet for determining the standard deviation.)

(7) *Number of Measurements Used.* For each work category, enter the total number of actual observations (filters) used to determine all of the employee's TWAs in the category. This includes the number of all non-detectable measurements.

(8) *Number of Non-detectable Measurements.* For each work category, enter the number of measurements that are below detectable levels. (Non-detectable levels may not be greater than 0.1 f/cc.)

(9) *Ceiling Concentration Level.* For each work category, enter the range of ceiling concentration levels that were determined. Provide the low and high measurements.

(10) *Sampling and Analyses Methods.* If the company used the NIOSH methodology to sample airborne concentrations of asbestos fibers in the workplace and to analyze measurements [DHEW (NIOSH) Pub. No. 79-127], check the corresponding box on the form.

If the company used other sampling and analysis methods, enter the appropriate codes for those methods listed in the next section of these instructions.

The reporting company has the option to describe in an attachment any additional information that will better describe work practices or other measures instituted to reduce the levels of airborne fibers or to protect workers from exposure to asbestos. Attach any additional materials to this form at the time of submission.

(11) Enter the lowest detectable level of the measurements the company expects to attain by the sampling and analysis methods. (Measurements below this level are considered "non-detectable" for the purposes of this rule.)

I. Measuring Asbestos Emissions or Fiber Release

If the plant site has applied for a water effluent discharge permit (NPDES Permit), provide the application date and the permit number that was assigned.

Summarize and report separately the results of any measurements or monitoring performed to determine the amount of asbestos fiber released during the production, use, or disposal of asbestos fiber or asbestos products (other than already reported in part H of this form). If attaching any such information for this section, check the "yes" box on the form. If not, mark "X" for no separate report. Where possible, the measurements should characterize the type of fibers found and the fiber size distribution, and should be reported according to the following ranges.

Reports submitted in response to this section should describe the methodologies used to perform any tests, to gather samples, and to analyze samples. If this information has been previously submitted to a Federal agency, do not report again here, but indicate the date and to whom the information was sent, and briefly describe the nature of the information. Where possible, summarize the sampling and analytical methodologies according to the terms and abbreviations listed below.

Fiber size distributions	Analysis methodologies
<1.0	Optical Microscopy.
1.0-2.0	PC Phase Contrast Microsco-py.
2.0-3.0	PM Polarizing Microscopy.
3.0-4.0	DS Dispersion Staining.
4.0-5.0	OM Other optical microsco techniques (specify).
5.0-10.0	
10.0-20.0	Electron Microscopy.
20.0-30.0	TEM Transmission Electr Microscopy.
<30.0	
	SEM Scanning Electron M croscopy.
Sampling Methodologies	
	ED Electron Diffraction.
	XRS X-Ray Spectrometry.
K Konimeter	EM Unknown electron m croscopy results.
TP Thermal Precipitator	
I Impinger	O Any other analysis metho ology (Provide specifica tions).
MI Midget Impinger	
MF Membrane Filter EPA Provisional Methodology	

EPA—"Electron Microscope Measurement of Airborne A bestos Concentration—A Provisional Methodology," EP 600/2-77-178 (Revised June 1978).

J. Waste and Disposal

Entries in this section will account for the waste that is not recycled and results from the production of each type of end product subcategory reported. The percentage of the total waste from the plant site that results from the production of each end product subcategory may be estimated. Report separately the data for each end product subcategory. If unable to determine quantities by product subcategory, report total quantities disposed of for each form of waste.

(1) *Product Line.* Enter the product subcategory code (and generic name if used) for each end product subcategory reported in parts B(1), C, or D. Miners and/or millers need only list the type of bulk asbestos fiber reported in section B(1). If unable to determine wastes by end product subcategory, report according to the form of the waste (see below); enter the name(s) and codes from parts C and D. Mark (X) in the appropriate box to indicate that the data is either an "End Product Report" or a "Form of Waste Report."

(2) *Form of Waste.* Record the form of the waste either after completion of the processing or as it leaves the plant site. Report asbestos collected in control devices, such as baghouse fines, on a separate line.

(3) *Total Annual Quantity of Asbestos Waste (Short Tons).* Enter the total quanti-

n short tons, of asbestos waste generat-
y each reported end product production
in 1981. Asbestos waste is a waste prod-
that contains asbestos as some of the
waste. Do not report quantities of
e recycled or reprocessed.

Average Percent Asbestos. Record in
t tons the average percentage of asbes-
by weight) in the total quantity of as-
os waste. This figure may be an esti-
e based on previous experience or an ex-
olation of production mass balance fig-

Disposal Site(s). (a) Type of Land Dis-
Facility. Mark (X) one of the follow-
ypes of land disposal facilities or the as-
os waste of each end product subcatego-
r form of waste. See the February 5,
FEDERAL REGISTER (46 FR 11126) for
orehensive definitions of the types of
ties.

rface Impoundments—facilities at
ich liquid wastes or other liquids are
pounded or held. Surface impound-
nts are generally earthen structures de-
ned to hold an accumulation of liquids
wastes containing free liquid.

ste Piles—facilities at which wastes,
ally in a solid state, are placed on the
d for storage or treatment.

nd Treatment—facilities at which
tes (usually in a solid, semi-solid, semi-
id, or liquid state) are spread on the
und for the purpose of treatment.

ndfills—facilities at which wastes, usu-
in solid or semi-solid state, are placed
o or on the land for permanent dispos-

page Facilities—facilities at which
tes (usually in a liquid, semi-liquid, or
i-solid state) are placed into or on the
d for storage, treatment, or disposal. A
page facility is designed with the objec-
of discharging liquids into the land.
ere are four types of seepage facilities:

eepage lagoons
rying beds
eepage pits
eepage beds

ction Wells—facilities at which wastes
fluid (usually liquid) state are inject-
into the land under a pressure head
ater than the pressure head of the
und water into or above which they are
cted for disposal.

Location of Disposal Facility—For
end product subcategory (or form of
), mark (X) whether wastes are dis-
of at this plant site (on-site) or at an-
site (off-site).

Ownership of Disposal Facility—For
end product subcategory (or form of
), mark (X) whether this disposal facil-
owned by reporting company (compa-
nother private company (private), or a
ipality (municipal).

(d) *Permitted Hazardous Waste Facility*—For each product subcategory (or form of waste), mark (X) whether the disposal facility is permitted under any applicable State or Federal hazardous waste regulation.

(6) *Method of Disposal.* Briefly describe the specific methods used to dispose of asbestos waste. For example, if you wet the waste and place it in a bag or drum prior to disposal, that should be noted here.

(7) *Additional Information.* Submit any additional information to describe any steps taken during waste disposal to reduce the release of airborne asbestos fibers. If enclosing a separate description, check "Yes" on the form; if not, check "No" in the space provided.

K. Pollution Control Equipment

In this section, provide information on all air pollution equipment located at the plant site to control or remove airborne asbestos fiber. List each piece of equipment on a separate line on the form, even though identical units may be used at the plant site. Use the codes listed in this section for each piece of equipment being reported. For additional space, fill in and attach additional copies of the form. If the company has submitted portions of the required data to EPA previously and the data are still current, enter "EPA" in place of those data, and reference the address where the data were sent and the date they were sent.

(1) *Item Number.* Number each piece of equipment consecutively (one through the total number of pieces of equipment).

(2) *Type of Equipment.* For each item number, enter the appropriate abbreviation from the following list.

- Baghouse (BH)
  - —Reverse Air (RA)
  - —Pulse Jet (PJ)
  - —Shake (S)
  - —Other (O)

For example, if the baghouse used is equipped for both reverse air and shake cleaning, enter (BH) (RA) (S).

- Scrubber (S)
  - —Venturi (V)
  - —Impingement (I)
  - —Spray (SP)
  - —Other (O)

If the scrubber used is the venturi type, also enter the pressure drop in inches of water in parentheses. For example, if the range of pressure drop, is 40-60 inches, enter (S) (V) (40-60).

- Electrostatic Precipitator (ESP)
- Cyclone (C)
- Multiple Cyclone (MC)
- Other (O)

(3) *Gas Stream Volume and Temperature.* For each piece of equipment, enter the gas

volume (in cubic feet per minute) and the operating temperature (in °F). Use actual data for these entries, although estimates or design figures may be used if actual data are unavailable. Ranges (ex: 8,000-10,000 ACFM at (40-180 °F)) are also acceptable.

(4) *Equipment Size.* If electrostatic precipitators and/or baghouses are used, enter the total square feet of collecting surface area. For all other types of equipment mark (X) "N/A."

(5) *Estimated Collection Efficiency.* Enter the collection efficiency (percent), or an estimate of this value, of each piece of equipment. Mark (X) either design (D) or actual (A) to indicate basis for response.

(6) *Normal Operating Schedule.* Enter the normal number of operating hours either actual or estimated for each piece of equipment during 1981.

(7) *Quantity Collected Annually.* Estimate the quantity of material in pounds that is (or would be, given the design of the equipment) collected annually by each piece of equipment in 1981. Include all asbestos and non-asbestos materials in the total. If possible, estimate the percent (by weight) of asbestos in the collected material. Mark (X) either design (D) or actual (A) to indicate basis for response.

(8) *Source of Emissions.* Enter a brief description of the source of the emissions such as work area exhaust ventilation, curing oven, mixer, various, etc.

(9) *Stack or Chimney.* Indicate whether the air pollution control device discharges to a stack or chimney; check "Yes" or "No."

(10) *Special Problems.* If there is a special problem with particulate collection or with any specific piece of equipment, discuss it in the space provided. Be sure to indicate which piece of equipment is being discussed.

(11) Estimate the percent of plant exhaust air that is treated by the plant site's pollution control equipment.

APPENDIX A—DEFINITION OF TERMS

Several terms are used throughout the reporting form and the instruction booklet to describe the different kinds of asbestos products and how to report them.

Asbestos Mixture: a mixture which contains bulk asbestos or another asbestos mixture as an intentional component. An asbestos mixture can be utilized as a finished product or incorporated into other products.

Bulk Asbestos (or raw asbestos): Any quantity of asbestos fiber of any type or grade, or combination of types of grades, that is mined or milled with the express purpose to obtain asbestos. The term does not include asbestos that is produced or processed as a contaminant or an impurity. Asbestos is a group of naturally occurring, inorganic, highly fibrous, silicate minerals, which easily separate into long, thin, flexible fibers when crushed or processed. Included
in the definition are the asbestiform
ties of: chrysotile (serpentine); crocid
(riebeckite); amosite (cummingtonite-
erite); anthophyllite; tremolite; and ac
lite.

End Product: The product subcate
that is either shipped from the reported
or imported into the United States.

Generic Name: A term that describes
coded product subcategory better than
subcategory name given on the form. If
product subcategory name on the for
adequate, use it.

Importer: A person or facility impor
asbestos, in bulk form or as part of a
ture or article, into the customs territor
the United States. This definition inclu

- The person liable for the payment of
  duties on the merchandise, or
- An authorized agent on his behalf (a
  fined in 19 CFR 1.11). Importer als
  cludes, as appropriate:

—The consignee;
—The importer of record;
—The actual owner if an actual ow
declaration and superseding bond
been filed in accordance with 19 C
141.20; or
—The transferee, if the right to draw
chandise in a bonded warehouse
been transferred in accordance with
part C of 19 CFR Part 144. For the
pose of this definition, the customs
ritory of the United States consist
the 50 states, Puerto Rico, and the
trict of Columbia. When two or
persons meet the same definition of
porter" for the same shipment, the
cipal in the transaction, not his age
agents, should report.

NOTE: If reporting company purchase
the United States an asbestos product
originated outside the United States, do
report as an importer.

For reporting purposes, there are se
classes of importers:

—An *Importer of Bulk Asbestos* impo
bulk asbestos into the customs terr
of the United States. Imported bul
bestos is declared to the United St
Customs Service upon entry as T
Schedule of the United States, An
tated, (TSUSA) numbers 518.1
518.1160. Importers need report in
mation only to the extent that th
formation is in their possession.
—An *Importer of Asbestos Mixtures*
ports asbestos mixtures into the cus
territory of the United States. Impor
mixtures include, but are not limite
merchandise declared to the Un
States Customs Service upon entr
Tariff Schedule of the United St
Annotated, numbers (TSUSA Num

518.2-518.5, or other TSUSA Numbers that may pertain to asbestos mixtures.

–An *Importer of Article(s) Containing Asbestos Component(s)* imports an article that contains one or more asbestos components.

Miner and/or Miller of Asbestos: a person who either mines or mills asbestos. Mined or extracted asbestos-containing ore is further milled to produce bulk asbestos. Milling involves the separation of the fibers from the ore, grading and sorting the fibers, or fiberizing crude asbestos ore.

Primary Processor of Asbestos: A person who processes bulk asbestos to makes an asbestos mixture or a product that contains asbestos. A primary processor who make an asbestos mixture and then processes the asbestos mixture at the same site to make a different end product should report production of the final end product. Primary processing includes the mixing or repackaging of raw asbestos fiber.

Product Subcategory: The type of asbestos mixture or the type of end product listed and numbered on the form.

Secondary Processor of Asbestos: A person who processes an asbestos mixture that is then incorporated into that person's end product. Secondary processors use asbestos mixtures that are made at a site other than the site being reported. For instance, asbestos millboard may be purchased by a secondary processor, who could cut that millboard and incorporate it into an appliance.

APPENDIX B—HOW TO COMPUTE SUMMARIES OF MONITORING DATA—INSTRUCTIONS AND WORKSHEETS

These instructions describe how to compute the arithmetic mean and standard deviation of the TWA values for each category of employees counted in column 4 of part H of the form. It is probably easier to compute the figures by working through one line at a time. For example, a primary processor who has employees working in the fiber introduction area should locate all monitoring data for those employees, and work through question 10 before beginning computations for the next production work category for that end product. A worksheet is attached to these instructions; after completing it, transfer your computations to part H of the form.

I. To compute the "mean" for the TWA values for a production work category, first list all of the TWA values for employees counted in the category. Do not include non-detectable TWA values in the following calculations.

For example, assume the following TWA values (listed in column A) for a production work category:

No.	TWA values	Squares of column (A)
1.	1.00	1.00
2.	1.50	2.25
3.	0.50	0.25
4.	1.75	3.06
5.	1.25	1.56
	6.00	8.12

After listing the TWA values in column (A) on the worksheet, square each value and enter the *square* in column (B) on the worksheet. The squares are used later to compute the standard deviation. Sum both columns.

II. Next, determine the number (N) of values. In this example, N=5.

III. The "mean" is the sum of the TWA values in column A divided by the number of values (N).

In this example:

$$\text{Mean} = \frac{\text{Sum of TWA values}}{\text{N}} = \frac{6.00}{5} = 1.20$$

IV. To calculate the "standard deviation" of these values, first compute the "variance" according to the following formula.

In this example:

$$(V) = \frac{1}{N-1} \times \left[\text{Sum of Column B} - \frac{(\text{Sum of Column A})^2}{N} \right]$$

$$= \frac{1}{5-1} \times \left[8.12 - \frac{(6.0 \times 6.0)}{5} \right] = ¼\,(8.12-7.2) = .92/4 = .23$$

V. Finally, the standard deviation (SD) is the square root of the variance.

In this example:

$SD = \sqrt{V}$

$= \sqrt{.23}$

$SD = 0.48$

The arithmetic mean is entered in colum 5 on the form, and the standard deviation entered in column 6 on the form.

Worksheet

.

No.	(A) TWA Values	(B) Squares of Column (A)
1.		
2.		
3.		
4.		
5.		
Total	________	________

. Number of TWA values (N) = ________

I. $\text{Mean} = \dfrac{\text{Sum of Column A}}{N}$

. $\text{Variance (V)} = \dfrac{1}{N-1}\left[\text{Sum of Column B} - \dfrac{(\text{Sum of Column A})^2}{N}\right]$

$$= \frac{1}{\boxed{}}\left[\boxed{} - \frac{\boxed{}^{\,2}}{N}\right]$$

$$= \underline{}$$

$\text{Standard Deviation (SD)} = \sqrt{V} = \sqrt{}$

$= \underline{}$

§ 763.77 Reporting secondary processing and importation of asbestos mixtures.

The following EPA Form 7710-37, Reporting Secondary Processing and Importation of Asbestos Mixtures, will be completed and submitted to EPA as required in §§ 763.65 and 763.71. Information must be reported on this form to the extent that it is in the possession of the respondent. Importers must report imported products only if the imported product is listed on this form.

(a) EPA Form 7710-37 (8-80).

EPA

US ENVIRONMENTAL PROTECTION AGENCY

REPORTING SECONDARY PROCESSING AND IMPORTATION OF ASBESTOS MIXTURES

PART I – COMPANY INFORMATION

COMPANY NAME	FOR EPA USE ONLY	
ADDRESS *(Street, City, State & ZIP Code)*	TECHNICAL CONTACT	TELEPHONE NO.
	IMPORTER ☐ PRINCIPAL	☐ AGENT

PART II – SECONDARY PROCESSOR END PRODUCT(S)

From the list in Section I, enter the asbestos end product produced. Opposite each product, list the asbestos mixture that you process, and the quantity of each mixture that you consumed in 1981.

END PRODUCT(S)		ASBESTOS MIXTURE(S)		QUANTITY OF ASBESTOS MIXTURE CONSUMED	
CODE	GENERIC NAME	CODE	GENERIC NAME	QUANTITY	UNIT OF MEASURE

PART III – IMPORTERS OF ASBESTOS MIXTURE(S) OR ARTICLE(S) CONTAINING ASBESTOS COMPONENTS

List the asbestos mixture(s) or article(s) that you import and the quantity of each item that you imported in 1981. Opposite each item, enter a description of the asbestos component in the mixture or article.

ASBESTOS MIXTURE(S) OR ARTICLE(S)		QUANTITY OF ASBESTOS MIXTURE(S) OR ARTICLE(S) IMPORTED		DESCRIPTION OF ASBESTOS COMPONENT(S) IN ARTICLE
CODE	GENERIC NAME	QUANTITY	UNIT OF MEASURE	

CERTIFICATION FOR CLAIMS OF CONFIDENTIAL BUSINESS INFORMATION

An authorized company official may claim any information reported on this form as confidential business information. To do this, the confidential information must be clearly circled with a red marker. In addition, an authorized company official must sign below to certify the truth and accuracy of the following four statements, which apply to all information that is claimed.

1. My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures.
2. The information is not, and has not been, reasonably obtainable by other persons (other than governmental bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent.
3. The information is not publicly available elsewhere.
4. Disclosure of the information claimed as confidential would cause substantial harm to my company's competitive position.

NATURE OF AUTHORIZED OFFICIAL	DATE

Form 7710-37 (10-81)

REPORTING SECONDARY PROCESSING AND IMPORTATION OF ASBESTOS MIXTURES

INSTRUCTIONS

This form is to be completed by persons who, in 1981, were secondary processors of asbestos or importers of asbestos mixtures or articles that contain asbestos components. See "Reporting Commercial and Industrial Uses of Asbestos", 40 CFR Part 763, Subpart D, for a full description of the reporting requirement and reporting schedule.

If additional space is needed, you should use additional copies of this form.

WHO MUST COMPLETE EPA FORM 7710-37

1. Secondary processors of asbestos must complete Part I and II of the form. Each plant site or manufacturing facility must be reported separately. If you process bulk asbestos fiber to make any of your products at this plant site, then you are a PRIMARY PROCESSOR and you should report this plant site on EPA Form 7710-36.
2. Importers of asbestos mixture(s) or article(s) containing asbestos components must complete Part I and III of the form. If you import bulk asbestos fiber, then you should report all importation activities on EPA Form 7710-36.
3. Those who are both secondary processors and importers must complete Parts I, II and III of the form.

DEFINITIONS

1. Asbestos Mixture - means a mixture which contains bulk asbestos or another mixture. Section 2 below lists typical terms for asbestos mixtures.

2. Asbestos Component—means any asbestos mixture, including any finished product containing an asbestos mixture, which is incorporated into an article. Section I below lists typical terms for products made from asbestos mixtures and components. Some examples of asbestos components are asbestos paper in a hair-dryer, asbestos-reinforced plastic cabinet of a television, asbestos textile that is part of a particular type of garment.
3. Secondary Processor of Asbestos—means a person who processes an asbestos mixture.
4. Importer of Asbestos Mixtures or Articles Containing Asbestos Component(s)—means a person who imports merchandise that contains asbestos into the customs territory of the United States. Where there are two or more "importers" for the same shipment, the Principal rather than the Agent should report if possible.

PART I COMPANY INFORMATION

Enter the name, address, and phone number of your company. Enter the name of the principal technical contact who is either responsible for the completion of this form, or has sufficient knowledge of its content to respond to questions posed by EPA. If you are reporting as an importer, check the appropriate box to indicate that you are either the Principal importer or the Agent for the Principal.

PART II SECONDARY PROCESSOR END PRODUCTS

End Products(s)—Locate in Section 1 the name of the product subcategory that most specifically describes your end product. In this column, enter the code number for the end product you make and write in the generic name for the product. If you are reporting a product that is not listed, enter the code for "other" that is listed under the most specific general category of products and write in the generic name. Report each end product on separate lines. For example, if you make appliances and are reporting toasters, enter "114" and "toaster".

Asbestos Mixture(s)—For each end product locate in Section 2 the name of the asbestos mixture that most specifically describes the asbestos mixture that you incorporate into the end product. In this column, enter the code number for the asbestos mixture and write in the generic name. If you incorporate more than one asbestos mixture into a single end product then use as many lines as necessary to report all asbestos mixtures in the end product. For example, if you incorporate asbestos millboard into your toaster, your entries would be as follows:

End Product	*Asbestos Mixture*
114 toaster	03 millboard

Quantity of Asbestos Mixture Consumed—Opposite each asbestos mixture that is listed enter the quantity of each mixture that you consumed in 1981. Specify the quantity according to the unit of measure listed in Section 2. If the unit of measure is not listed report the quantity in short tons. If your records do not permit you to list the quantities consumed for separate end products, then report the total amount of each type of asbestos mixture and enter "T" (for total) next to the figure.

PART III IMPORTERS OF ASBESTOS MIXTURE(S) OR ARTICLE(S) CONTAINING AN ASBESTOS COMPONENT

Asbestos Mixture or Article—For each type of imported product, locate in either Section 1 or Section 2 the name that most specifically describes the product you import. Enter the code number and generic name for the imported product.

Quantity of Asbestos Mixture(s) or Articles Imported—For each product listed, record the total annual quantity imported in 1981. Specify the quantity according to the unit of measure listed in Section 2, if possible, or according to the unit of measure as reported to the US Customs Service upon entry of the merchandise into the United States.

Description of Asbestos Components in Article—List all asbestos components in the imported article by entering the name of the asbestos component opposite the name of the article. If the reported product is an asbestos mixture listed in Section 2, then you should complete this description.

SECTION 1 - TYPICAL TERMS FOR PRODUCTS MADE OF ASBESTOS MIXTURES

AUTOMOTIVE AND FRICTION PRODUCTS

101 Drum brake lining (light-medium vehicle)
102 Disc brake pads (light-medium vehicle)
103 Disc brake pads (heavy vehicle)
104 Brake block (heavy equipment)
105 Clutch facings (all)
106 Automatic transmission friction components
107 Friction materials (industrial and commercial)
108 Custom automotive body filler
109 Transmissions
110 Mufflers
111 Radiator top insulation
112 Radiator sealant
113 Other (specify generic name)

APPLIANCES

114 Appliances, industrial and consumer (specify generic name)

CONSTRUCTION PRODUCTS

115 Boiler and furnace baffles
116 Decorated building panels
117 A/C sheet
118 Flexible air conductor
119 Hoods and vents
120 Portable construction building
121 Roofing, saturated
122 Roof shingles
123 Wallboard
124 Wall roofing panels
125 Other (specify generic name)

CLOTHING

126 Aprons
127 Boots
128 Gloves and mittens
129 Hats and helmets
130 Overgaitors
131 Suits
132 Other (specify generic name)

FLOOR COVERINGS

133 Vinyl asbestos floor tile
134 Asbestos felt backed sheet vinyl flooring

ELECTRICAL PRODUCTS AND COMPONENTS

135 Cable insulation
136 Electronic motor components
137 Electrical resistance supports
138 Electrical switchboard
139 Electrical switch supports
140 Electrical wire insulation
141 Motor armature
142 Other (specify generic name)

FIRE AND HEAT SHIELDING EQUIPMENT AND COMPONENTS

143 Arc deflectors
144 Fire doors
145 Fireproof absorbent paper
146 Heat shields
147 Molten metal handling equipment
148 Oven and stove insulation
149 Pipe wrap
150 Stove lining, wood and coal
151 Stove pipe rings
152 Sleeves
153 Thermal insulation
154 Other (specify generic name)

GASKETS

155 Sheet gasketing, rubber encapsulated beater addition
156 Sheet gasketing, rubber encapsulated compressed
157 Compressed sheet gasketing (other)
158 Metal reinforced gaskets
159 Automotive gaskets
160 Other (specify generic name)

MARINE EQUIPMENT AND SUPPLIES

161 Caulks, marine
162 Liners, pond or canal
163 Marine bulkheads
164 Other (specify generic name)

PAINTS, COATINGS, SEALANTS, AND COMPOUNDS

165 Asphaltic compounds
166 Automotive/truck body coatings
167 Buffing and polishing compounds
168 Caulking and patching compounds
169 Drilling fluid
170 Flashing compounds
171 Furnace cement
172 Glazing Compounds
173 Plaster and stucco
174 Pump, valve, flange, and tank sealing components
175 Roof coatings
176 Textured paints
177 Tile cement
178 Other (specify generic name)

TEXTILE AND FELT PRODUCTS (other than clothing)

179 Aluminized cloth
180 Rope or braiding
181 Yarn, lap, or roving
182 Wicks
183 Bags
184 Belting
185 Blankets
186 Carpet padding
187 Commercial/industrial dryer felts
188 Draperies
189 Drip cloths
190 Fire hoses
191 Ironing board pads and insulation
192 Mantles, lamp or catalytic heater
193 Packing and packing components
194 Piano and organ felts
195 Rugs
196 Tape
197 Theater curtains
198 Umbrella
199 Other (specify generic name)

MISCELLANEOUS PRODUCTS

200 Aerial distress flares
201 Acoustical products
202 Ammunition wadding
203 Asbestos-reinforced plastic products
204 Ash trays
205 Baking sheets
206 Blackboards
207 Candlesticks
208 Chemical tanks and vessels
209 Filters
210 Grommets
211 Gun grips
212 Jewelry making equipment
213 Kilns
214 Lamp sockets
215 Light bulbs (all types)
216 Linings for vaults, safes humidifiers, and filing cabinets
217 Phonograph records
218 Pottery clay
219 Welding rod coatings
220 Other (specify generic name)

SECTION 2 - TYPICAL TERMS FOR ASBESTOS MIXTURES

PAPERS, FELTS, OR RELATED PRODUCTS

01 commerical paper	short tons
02 rollboard	short tons
03 millboard	short tons
04 pipeline wrap	short tons
05 beater add gasketing paper	short tons
06 high grade electrical paper	short tons
07 unsaturated roofing felt	short tons
08 saturated roofing felt	short tons
09 flooring felt	short tons
10 corrugated paper	short tons
11 specialty paper (specify)	short tons

FLOOR COVERINGS

12 vinyl asbestos floor tile	square yards
13 asbestos felt-backed vinyl flooring	square yards

ASBESTOS-CEMENT PRODUCTS

14 A/C pipe and fittings	short tons
15 A/C sheet, flat	100 square feet
16 A/C sheet, corrugated	100 square feet
17 A/C shingle	squares

FRICTION MATERIALS

18 drum brake lining (light-medium vehicle)	pieces
19 disc brake pads (light-medium vehicle)	pieces
20 disc brake pads (heavy equipment)	pieces
21 brake block (heavy equipment	pieces
22 clutch facings (all)	pieces
23 automatic transmissions friction components	pieces
24 friction materials (industrial and commercial)	pieces

TEXTILES

25 cloth	pounds
26 thread, yarn, lap, roving, cord, rope or wick	pounds

OTHER PRODUCTS

27 sheet asketing (other than beater-add)	square yards
28 packing	pounds
29 paints and suface coatings	gallons
30 adhesives and sealants	gallons
31 asbestos-reinforced plastics	pounds
32 insulation materials not elsewhere classified (n.e.c.)	______
33 mixed or repackaged asbestos fiber	short tons
34 other (n.e.c.)	______

(b) [Reserved]

7 FR 33207, July 30, 1982; 47 FR 38324, Aug. 31, 1982]

§ 763.78 Sunset provision.

All requirements of this rule will terminate five years after promulgation of this rule. This provision is not a defense to any enforcement action based on noncompliance which occurred during the effective period of this rule.

Subpart E—Asbestos-Containing Materials in Schools

SOURCE: 52 FR 41846, Oct. 30, 1987, unless otherwise noted.

§ 763.80 Scope and purpose.

(a) This rule requires local education agencies to identify friable and nonfriable asbestos-containing material (ACM) in public and private elementary and secondary schools by visually inspecting school buildings for such materials, sampling such materials if they are not assumed to be ACM, and having samples analyzed by appropriate techniques referred to in this rule. The rule requires local education agencies to submit management plans to the Governor of their State by October 12, 1988, begin to implement the plans by July 9, 1989, and complete implementation of the plans in a timely fashion. In addition, local education agencies are required to use persons who have been accredited to conduct inspections, reinspections, develop management plans, or perform response actions. The rule also includes recordkeeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators, or if applicable, a State's lead agency designated by the State Governor, for assistance in complying with this rule.

(b) Local education agencies must provide for the transportation and disposal of asbestos in accordance with EPA's "Asbestos Waste Management Guidance." For convenience, applicable sections of this guidance are reprinted as Appendix D of this subpart. There are regulations in place, however, that affect transportation and disposal of asbestos waste generated by this rule. The transportation of asbestos waste is covered by the Department of Transportation (49 CFR Part 173, subpart J) and disposal is covered by the National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Part 61, subpart M).

§ 763.83 Definitions.

For purposes of this subpart:

"Act" means the Toxic Substances Control Act (TSCA), 15 U.S.C. 2601, *et seq.*

"Accessible" when referring to ACM means that the material is subject to disturbance by school building occupants or custodial or maintenance personnel in the course of their normal activities.

"Accredited" or "accreditation" when referring to a person or laboratory means that such person or laboratory is accredited in accordance with section 206 of Title II of the Act.

"Air erosion" means the passage of air over friable ACBM which may result in the release of asbestos fibers.

"Asbestos" means the asbestiform varieties of: Chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonitegrunerite); anthophyllite; tremolite; and actinolite.

"Asbestos-containing material" (ACM) when referring to school buildings means any material or product which contains more than 1 percent asbestos.

"Asbestos-containing building material" (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building.

"Asbestos debris" means pieces of ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.

"Damaged friable miscellaneous ACM" means friable miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other

reason lacks fiber cohesion or adhesion qualities. Such damage or deterio-
ration may be illustrated by the sepa-
ration of ACM into layers; separation
of ACM from the substrate; flaking,
blistering, or crumbling of the ACM
surface; water damage; significant or
repeated water stains, scrapes, gouges,
mars or other signs of physical injury
on the ACM. Asbestos debris originat-
ng from the ACBM in question may
lso indicate damage.

"Damaged friable surfacing ACM"
neans friable surfacing ACM which
as deteriorated or sustained physical
njury such that the internal structure
(cohesion) of the material is inad-
quate or which has delaminated such
hat its bond to the substrate (adhe-
ion) is inadequate, or which, for any
ther reason, lacks fiber cohesion or
dhesion qualities. Such damage or de-
erioration may be illustrated by the
eparation of ACM into layers; separa-
ion of ACM from the substrate; flak-
ng, blistering, or crumbling of the
CM surface; water damage; signifi-
ant or repeated water stains, scrapes,
ouges, mars or other signs of physical
njury on the ACM. Asbestos debris
riginating from the ACBM in ques-
on may also indicate damage.

"Damaged or significantly damaged
ermal system insulation ACM"
eans thermal system insulation ACM
n pipes, boilers, tanks, ducts, and
her thermal system insulation
uipment where the insulation has
st its structural integrity, or its cov-
ing, in whole or in part, is crushed,
ater-stained, gouged, punctured,
issing, or not intact such that it is
ot able to contain fibers. Damage
ay be further illustrated by occasion-
punctures, gouges or other signs of
ysical injury to ACM; occasional
ater damage on the protective cover-
gs/jackets; or exposed ACM ends or
ints. Asbestos debris originating
om the ACBM in question may also
dicate damage.

"Encapsulation" means the treat-
ent of ACBM with a material that
rrounds or embeds asbestos fibers in
adhesive matrix to prevent the re-
se of fibers, as the encapsulant cre-
es a membrane over the surface
ridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

"Enclosure" means an airtight, impermeable, permanent barrier around ACBM to prevent the release of asbestos fibers into the air.

"Fiber release episode" means any uncontrolled or unintentional disturbance of ACBM resulting in visible emission.

"Friable" when referring to material in a school building means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously nonfriable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

"Functional space" means a room, group of rooms, or homogeneous area (including crawl spaces or the space between a dropped ceiling and the floor or roof deck above), such as classroom(s), a cafeteria, gymnasium, hallway(s), designated by a person accredited to prepare management plans, design abatement projects, or conduct response actions.

"High-efficiency particulate air" (HEPA) refers to a filtering system capable of trapping and retaining at least 99.97 percent of all monodispersed particles 0.3 μm in diameter or larger.

"Homogeneous area" means an area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.

"Local education agency" means:

(1) Any local educational agency as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 3381).

(2) The owner of any nonpublic, nonprofit elementary, or secondary school building.

(3) The governing authority of any school operated under the defense dependents' education system provided for under the Defense Dependents' Education Act of 1978 (20 U.S.C. 921, et seq.).

"Miscellaneous ACM" means miscellaneous material that is ACM in a school building.

"Miscellaneous material" means interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

"Nonfriable" means material in a school building which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

"Operations and maintenance program" means a program of work practices to maintain friable ACBM in good condition; ensure clean up of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACBM disturbance or damage.

"Potential damage" means circumstances in which:

(1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

(2) There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.

"Potential significant damage" means circumstances in which:

(1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

(2) There are indications that there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.

(3) The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.

"Preventive measures" means actions taken to reduce disturbance of ACBM or otherwise eliminate the reasonable likelihood of the material's becoming damaged or significantly damaged.

"Removal" means the taking out or the stripping of substantially all ACBM from a damaged area, a functional space, or a homogeneous area in a school building.

"Repair" means returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.

"Response action" means a method, including removal, encapsulation, enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACBM.

"Routine maintenance area" means an area, such as a boiler room or mechanical room, that is not normally frequented by students and in which maintenance employees or contract workers regularly conduct maintenance activities.

"School" means any elementary or secondary school as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2854)

"School building" means:

(1) Any structure suitable for use as a classroom, including a school facility such as a laboratory, library, school eating facility, or facility used for the preparation of food.

(2) Any gymnasium or other facility which is specially designed for athletic or recreational activities for an academic course in physical education.

(3) Any other facility used for the instruction or housing of students or for the administration of educational or research programs.

(4) Any maintenance, storage, or utility facility, including any hallway essential to the operation of any facility described in this definition of "school building" under paragraphs (1), (2), or (3).

(5) Any portico or covered exterior hallway or walkway.

(6) Any exterior portion of a mechanical system used to condition interior space.

"Significantly damaged friable miscellaneous ACM" means damaged friable miscellaneous ACM where the damage is extensive and severe.

"Significantly damaged friable surfacing ACM" means damaged friable surfacing ACM in a functional space where the damage is extensive and severe.

"State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Northern Marianas, the Trust Territory of the Pacific Islands, and the Virgin Islands.

"Surfacing ACM" means surfacing material that is ACM.

"Surfacing material" means material in a school building that is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

"Thermal system insulation" means material in a school building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

"Thermal system insulation ACM" means thermal system insulation that is ACM.

"Vibration" means the periodic motion of friable ACBM which may result in the release of asbestos fibers.

§ 763.84 General local education agency responsibilities.

Each local education agency shall:

(a) Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement reponse actions, including operations nd maintenance, are carried out in ccordance with subpart E of this part.

(b) Ensure that all custodial and maintenance employees are properly rained as required by this subpart E nd other applicable Federal and/or tate regulations (e.g., the Occupaonal Safety and Health Administraon asbestos standard for construcon, the EPA worker protection rule, r applicable State regulations).

(c) Ensure that workers and building ccupants, or their legal guardians, are formed at least once each school ear about inspections, response acons, and post-response action activies, including periodic reinspection and surveillance activities that are planned or in progress.

(d) Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.

(e) Ensure that warning labels are posted in accordance with § 763.95.

(f) Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under § 763.93(g).

(g)(1) Designate a person to ensure that requirements under this section are properly implemented.

(2) Ensure that the designated person receives adequate training to perform duties assigned under this section. Such training shall provide, as necessary, basic knowledge of:

(i) Health effects of asbestos.

(ii) Detection, identification, and assessment of ACM.

(iii) Options for controlling ACBM.

(iv) Asbestos management programs.

(v) Relevant Federal and State regulations concerning asbestos, including those in this subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Labor, the U.S. Department of Transportation and the U.S. Environmental Protection Agency.

(h) Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under this subpart.

§ 763.85 Inspection and reinspections.

(a) *Inspection.* (1) Except as provided in paragraph (a)(2) of this section, before October 12, 1988, local education agencies shall inspect each school building that they lease, own, or otherwise use as a school building to identify all locations of friable and nonfriable ACBM.

(2) Any building leased or acquired on or after October 12, 1988, that is to be used as a school building shall be inspected as described under paragraphs (a) (3) and (4) of this section

prior to use as a school building. In the event that emergency use of an uninspected building as a school building is necessitated, such buildings shall be inspected within 30 days after commencement of such use.

(3) Each inspection shall be made by an accredited inspector.

(4) For each area of a school building, except as excluded under § 763.99, each person performing an inspection shall:

(i) Visually inspect the area to identify the locations of all suspected ACBM.

(ii) Touch all suspected ACBM to determine whether they are friable.

(iii) Identify all homogeneous areas of friable suspected ACBM and all homogeneous areas of nonfriable suspected ACBM.

(iv) Assume that some or all of the homogeneous areas are ACM, and, for each homogeneous area that is not assumed to be ACM, collect and submit for analysis bulk samples under §§ 763.86 and 763.87.

(v) Assess, under § 763.88, friable material in areas where samples are collected, friable material in areas that are assumed to be ACBM, and friable ACBM identified during a previous inspection.

(vi) Record the following and submit to the person designated under § 763.84 a copy of such record for inclusion in the management plan within 30 days of the inspection:

(A) An inspection report with the date of the inspection signed by each accredited person making the inspection, State of accreditation, and if applicable, his or her accreditation number.

(B) An inventory of the locations of the homogeneous areas where samples are collected, exact location where each bulk sample is collected, dates that samples are collected, homogeneous areas where friable suspected ACBM is assumed to be ACM, and homogeneous areas where nonfriable suspected ACBM is assumed to be ACM.

(C) A description of the manner used to determine sampling locations, the name and signature of each accredited inspector who collected the samples, State of accreditation, and, if applicable, his or her accreditation number.

(D) A list of whether the homogeneous areas identified under paragraph (a)(4)(vi)(B) of this section, are surfacing material, thermal system insulation, or miscellaneous material.

(E) Assessments made of friable material, the name and signature of each accredited inspector making the assessment, State of accreditation, and if applicable, his or her accreditation number.

(b) *Reinspection.* (1) At least once every 3 years after a management plan is in effect, each local education agency shall conduct a reinspection of all friable and nonfriable known or assumed ACBM in each school building that they lease, own, or otherwise use as a school building.

(2) Each inspection shall be made by an accredited inspector.

(3) For each area of a school building, each person performing a reinspection shall:

(i) Visually reinspect, and reassess, under § 763.88, the condition of all friable known or assumed ACBM.

(ii) Visually inspect material that was previously considered nonfriable ACBM and touch the material to determine whether it has become friable since the last inspection or reinspection.

(iii) Identify any homogeneous areas with material that has become friable since the last inspection or reinspection.

(iv) For each homogeneous area of newly friable material that is already assumed to be ACBM, bulk samples may be collected and submitted for analysis in accordance with §§ 763.86 and 763.87.

(v) Assess, under § 763.88, the condition of the newly friable material in areas where samples are collected, and newly friable materials in areas that are assumed to be ACBM.

(vi) Reassess, under § 763.88, the condition of friable known or assumed ACBM previously identified.

(vii) Record the following and submit to the person designated under § 763.84 a copy of such record for inclusion in the management plan within 30 days of the reinspection:

(A) The date of the reinspection, the name and signature of the person making the reinspection, State of accreditation, and if applicable, his or her accreditation number, and any changes in the condition of known or assumed ACBM.

(B) The exact locations where samples are collected during the reinspection, a description of the manner used to determine sampling locations, the name and signature of each accredited inspector who collected the samples, State of accreditation, and, if applicable, his or her accreditation number.

(C) Any assessments or reassessments made of friable material, the name and signature of the accredited inspector making the assessments, State of accreditation, and if applicable, his or her accreditation number.

(c) *General.* Thermal system insulation that has retained its structural integrity and that has an undamaged protective jacket or wrap that prevents fiber release shall be treated as nonfriable and therefore is subject only to periodic surveillance and preventive measures as necessary.

§ 763.86 Sampling.

(a) *Surfacing material.* An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:

(1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in § 763.87(c)(2).

(2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in § 763.87(c)(2).

(3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in § 763.87(c)(2).

(b) *Thermal system insulation.* (1) Except as provided in paragraphs (b) 2) through (4) of this section and § 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples rom each homogeneous area of thermal system insulation that is not assumed to be ACM.

(2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.

(3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under § 763.87(c)(2).

(4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACBM.

(c) *Miscellaneous material.* In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable miscellaneous material that is not assumed to be ACM.

(d) *Nonfriable suspected ACBM.* If any homogeneous area of nonfriable suspected ACBM is not assumed to be ACM, then an accredited inspector shall collect, in a manner sufficient to determine whether the material is ACM or not ACM, bulk samples from the homogeneous area of nonfriable suspected ACBM that is not assumed to be ACM.

§ 763.87 Analysis.

(a) Local education agencies shall have bulk samples, collected under § 763.86 and submitted for analysis, analyzed for asbestos using laboratories accredited by the National Bureau of Standards (NBS). Local education agencies shall use laboratories which have received interim accreditation for polarized light microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Analysis Quality Assurance Program until the NBS PLM laboratory accreditation program for PLM is operational.

(b) Bulk samples shall not be composited for analysis and shall be analyzed for asbestos content by PLM, using the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" found at Appendix A to subpart F in 40 CFR Part 763.

(c)(1) A homogeneous area is considered not to contain ACM only if the results of all samples required to be collected from the area show asbestos in amounts of 1 percent or less.

(2) A homogeneous area shall be determined to contain ACM based on a finding that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent.

(d) The name and address of each laboratory performing an analysis, the date of analysis, and the name and signature of the person performing the analysis shall be submitted to the person designated under § 763.84 for inclusion into the management plan within 30 days of the analysis.

§ 763.88 Assessment.

(a)(1) For each inspection and reinspection conducted under § 763.85 (a) and (c) and previous inspections specified under § 763.99, the local education agency shall have an accredited inspector provide a written assessment of all friable known or assumed ACBM in the school building.

(2) Each accredited inspector providing a written assessment shall sign and date the assessment, provide his or her State of accreditation, and if applicable, accreditation number, and submit a copy of the assessment to the person designated under § 763.84 for inclusion in the management plan within 30 days of the assessment.

(b) The inspector shall classify and give reasons in the written assessment for classifying the ACBM and suspected ACBM assumed to be ACM in the school building into one of the following categories:

(1) Damaged or significantly damaged thermal system insulation ACM.

(2) Damaged friable surfacing ACM.

(3) Significantly damaged friable surfacing ACM.

(4) Damaged or significantly damaged friable miscellaneous ACM.

(5) ACBM with potential for damage.

(6) ACBM with potential for significant damage.

(7) Any remaining friable ACBM or friable suspected ACBM.

(c) Assessment may include the following considerations:

(1) Location and the amount of the material, both in total quantity and as a percentage of the functional space.

(2) Condition of the material, specifying:

(i) Type of damage or significant damage (e.g., flaking, blistering, water damage, or other signs of physical damage).

(ii) Severity of damage (e.g., major flaking, severely torn jackets, as opposed to occasional flaking, minor tears to jackets).

(iii) Extent or spread of damage over large areas or large percentages of the homogeneous area.

(3) Whether the material is accessible.

(4) The material's potential for disturbance.

(5) Known or suspected causes of damage or significant damage (e.g., air erosion, vandalism, vibration, water).

(6) Preventive measures which might eliminate the reasonable likelihood of undamaged ACM from becoming significantly damaged.

(d) The local education agency shall select a person accredited to develop management plans to review the results of each inspection, reinspection, and assessment for the school building and to conduct any other necessary activities in order to recommend in writing to the local education agency appropriate response actions. The accredited person shall sign and date the recommendation, provide his or her State of accreditation, and, if applicable, provide his or her accreditation number, and submit a copy of the recommendation to the person designated under § 763.84 for inclusion in the management plan.

§ 763.90 Response actions.

(a) The local education agency shall select and implement in a timely manner the appropriate response actions in this section consistent with the assessment conducted in § 763.88. The response actions selected shall be sufficient to protect human health and the environment. The local education agency may then select, from the response actions which protect human health and the environment, that action which is the least burdensome method. Nothing in this section shall be construed to prohibit removal of ACBM from a school building at any time, should removal be the preferred response action of the local education agency.

(b) If damaged or significantly damaged thermal system insulation ACM is present in a building, the local education agency shall:

(1) At least repair the damaged area.

(2) Remove the damaged material if it is not feasible, due to technological factors, to repair the damage.

(3) Maintain all thermal system insulation ACM and its covering in an intact state and undamaged condition.

(c)(1) If damaged friable surfacing ACM or damaged friable miscellaneous ACM is present in a building, the local education agency shall select from among the following response actions: encapsulation, enclosure, removal, or repair of the damaged material.

(2) In selecting the response action from among those which meet the definitional standards in § 763.83, the local education agency shall determine which of these response actions protects human health and the environment. For purposes of determining which of these response actions are the least burdensome, the local education agency may then consider local circumstances, including occupancy and use patterns within the school building, and its economic concerns, including short- and long-term costs.

(d) If significantly damaged friable surfacing ACM or significantly damaged friable miscellaneous ACM is present in a building the local education agency shall:

(1) Immediately isolate the functional space and restrict access, unless isolation is not necessary to protect human health and the environment.

(2) Remove the material in the functional space or, depending upon whether enclosure or encapsulation would be sufficient to protect human health and the environment, enclose or encapsulate.

(e) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for damage is present in a building, the local education agency shall at least implement an operations and maintenance (O&M) program, as described under § 763.91.

(f) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for significant damage is present in a building, the local education agency shall:

(1) Implement an O&M program, as described under § 763.91.

(2) Institute preventive measures appropriate to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated.

(3) Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment. Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health or the environment.

(g) Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short-duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions.

(h) The requirements of this subpart E in no way supersede the worker protection and work practice requirements under 29 CFR 1926.58 (Occupational Safety and Health Administration (OSHA) asbestos worker protection standards for construction), 40 CFR Part 763, subpart G (EPA asbestos worker protection standards for public employees), and 40 CFR Part 61, subpart M (National Emission Standards for Hazardous Air Pollutants—Asbestos).

(i) Completion of response actions. (1) At the conclusion of any action to remove, encapsulate, or enclose ACBM or material assumed to be ACBM, a person designated by the local education agency shall visually inspect each functional space where such action was conducted to determine whether the action has been properly completed.

(2)(i) A person designated by the local education agency shall collect air samples using aggressive sampling as described in Appendix A to this subpart E to monitor air for clearance after each removal, encapsulation, and enclosure project involving ACBM, except for projects that are of small-scale, short-duration.

(ii) Local education agencies shall have air samples collected under this section analyzed for asbestos using laboratories accredited by the National Bureau of Standards to conduct such analysis using transmission electron microscopy (TEM) or, under circumstances permitted in this section, laboratories enrolled in the American Industrial Hygiene Association Proficiency Analytical Testing Program for phase contrast microscopy (PCM).

(iii) Until the National Bureau of Standards TEM laboratory accreditation program is operational, local educational agencies shall use laboratories that use the protocol described in Appendix A to subpart E of this part.

(3) Except as provided in paragraphs (i) (4), (5), (6), or (7) of this section, an action to remove, encapsulate, or enclose ACBM shall be considered complete when the average concentration of asbestos of five air samples collected within the affected functional space and analyzed by the TEM method in Appendix A of this subpart E, is not statistically significantly different, as determined by the Z-test calculation found in Appendix A of this subpart E, from the average asbestos concentration of five air samples collected at the same time outside the affected functional space and analyzed in the same manner, and the average asbestos concentration of the three field blanks described in Appendix A of this subpart E is below the filter background level, as defined in Appendix A of this subpart E, of 70 structures per square millimeter (70 s/mm ^{2}).

(4) An action may also be considered complete if the volume of air drawn for each of the five samples collected within the affected functional space is equal to or greater than 1,199 L of air for a 25 mm filter or equal to or greater than 2,799 L of air for a 37 mm filter, and the average concentration of asbestos as analyzed by the TEM method in Appendix A of this subpart E, for the five air samples does not exceed the filter background level, as defined in Appendix A, of 70 structures per square millimeter (70 s/mm ^{2}). If the average concentration of asbestos of the five air samples within the affected functional space exceeds 70 s/mm ^{2}, or if the volume of air in each of the samples is less than 1,199 L of air for a 25 mm filter or less than 2,799 L of air for a 37 mm filter, the action shall be considered complete only when the requirements of paragraph (i) (3), (5), (6), or (7) of this section are met.

(5) At any time, a local education agency may analyze air monitoring samples collected for clearance purposes by phase contrast microscopy (PCM) to confirm completion of removal, encapsulation, or enclosure of ACBM that is greater than small-scale, short-duration and less than or equal to 160 square feet or 260 linear feet. The action shall be considered complete when the results of samples collected in the affected functional space and analyzed by phase contrast microscopy using the National Institute for Occupational Safety and Health (NIOSH) Method 7400 entitled "Fibers" published in the NIOSH Manual of Analytical Methods, 3rd Edition, Second Supplement, August 1987, show that the concentration of fibers for each of the five samples is less than or equal to a limit of quantitation for PCM (0.01 fibers per cubic centimeter (0.01 f/cm ^{3}) of air). The method is available for public inspection at the Office of the Federal Register, 11th and L St., NW., Room 8401, Washington, DC, 20408, and the EPA OPTS Reading Room, Rm. G004 Northeast Mall, 401 M St., SW., Washington, DC 20460. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. The method is incorporated as it exists on the effective date of this rule, and a notice of any change to the method will be published in the FEDERAL REGISTER.

(6) Until October 7, 1989, a local education agency may analyze air monitoring samples collected for clearance

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This incorporation by reference

was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. The method is incorporated as it exists on the effective date of this rule and a notice of any change to the method will be published in the FEDERAL REGISTER.

(8) To determine the amount of ACBM affected under paragraphs (i) (5), (6), and (7) of this section, the local education agency shall add the total square or linear footage of ACBM within the containment barriers used to isolate the functional space for the action to remove, encapsulate, or enclose the ACBM. Contiguous portions of material subject to such action conducted concurrently or at approximately the same time within the same school building shall not be separated to qualify under paragraphs (i) (5), (6), or (7) of this section.

[52 FR 41846, Oct. 30, 1987, as amended at 53 FR 12525, Apr. 15, 1988]

§ 763.91 Operations and maintenance.

(a) *Applicability.* The local education agency shall implement an operations, maintenance, and repair (O&M) program under this section whenever any friable ACBM is present or assumed to be present in a building that it leases, owns, or otherwise uses as a school building. Any material identified as nonfriable ACBM or nonfriable assumed ACBM must be treated as friable ACBM for purposes of this section when the material is about to become friable as a result of activities performed in the school building.

(b) *Worker protection.* The protection provided by EPA at 40 CFR 763.121 for worker protection during asbestos abatement projects is extended to employees of local education agencies who perform operations, maintenance, and repair (O&M) activities involving ACM and who are not covered by the OSHA asbestos construction standard at 29 CFR 1926.58 or an asbestos worker approved by OSHA under section 19 of the Occupational Safety and Health Act. Local education agencies may consult Appendix B of this subpart if their employees are performing operations, maintenance, and repair activities that are of small-scale, short-duration.

(c) *Cleaning*—(1) *Initial cleaning.* Unless the building has been cleaned using equivalent methods within the previous 6 months, all areas of a school building where friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the inspection required by § 763.85(a) and before the initiation of any response action, other than O&M activities or repair, according to the following procedures:

(i) HEPA-vacuum or steam-clean all carpets.

(ii) HEPA-vacuum or wet-clean all other floors and all other horizontal surfaces.

(iii) Dispose of all debris, filters, mopheads, and cloths in sealed, leak-tight containers.

(2) *Additional cleaning.* The accredited management planner shall make a written recommendation to the local education agency whether additional cleaning is needed, and if so, the methods and frequency of such cleaning.

(d) *Operations and maintenance activities.* The local education agency shall ensure that the procedures described below to protect building occupants shall be followed for any operations and maintenance activities disturbing friable ACBM:

(1) Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

(2) Post signs to prevent entry by unauthorized persons.

(3) Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

(4) Use work practices or other controls, such as, wet methods, protective clothing, HEPA-vacuums, mini-enclosures, glove bags, as necessary to inhibit the spread of any released fibers.

(5) Clean all fixtures or other components in the immediate work area.

(6) Place the asbestos debris and other cleaning materials in a sealed, leak-tight container.

(e) *Maintenance activities other than small-scale, short-duration.* The response action for any maintenance activities disturbing friable ACBM, other than small-scale, short-duration maintenance activities, shall be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.

(f) *Fiber release episodes*—(1) *Minor fiber release episode.* The local education agency shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., the falling or dislodging of 3 square or linear feet or less of friable ACBM): 5

(i) Thoroughly saturate the debris using wet methods.

(ii) Clean the area, as described in paragraph (e) of this section.

(iii) Place the asbestos debris in a sealed, leak-tight container.

(iv) Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented as required by § 763.90.

(2) *Major fiber release episode.* The local education agency shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., the falling or dislodging of more than 3 square or linear feet of friable ACBM):

(i) Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.

(ii) Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.

(iii) The response action for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.

§ 763.92 Training and periodic surveillance.

(a) *Training.* (1) The local education agency shall ensure, prior to the implementation of the O&M provisions of the management plan, that all members of its maintenance and custodial staff (custodians, electricians, heating/air conditioning engineers, plumbers, etc.) who may work in a building that contains ACBM receive awareness training of at least 2 hours, whether or not they are required to work with ACBM. New custodial and maintenance employees shall be trained within 60 days after commencement of employment. Training shall include, but not be limited to:

(i) Information regarding asbestos and its various uses and forms.

(ii) Information on the health effects associated with asbestos exposure.

(iii) Locations of ACBM identified throughout each school building in which they work.

(iv) Recognition of damage, deterioration, and delamination of ACBM.

(v) Name and telephone number of the person designated to carry out general local education agency responsibilities under § 763.84 and the availability and location of the management plan.

(2) The local education agency shall ensure that all members of its mainte-ance and custodial staff who conduct any activities that will result in the disturbance of ACBM shall receive raining described in paragraph (a)(1) f this section and 14 hours of addi-ional training. Additional training hall include, but not be limited to:

(i) Descriptions of the proper meth-ds of handling ACBM.

(ii) Information on the use of respi-atory protection as contained in the PA/NIOSH *Guide to Respiratory rotection for the Asbestos Abatement ndustry*, September 1986 (EPA 560/ PTS-86-001), available from TSCA ssistance Office (TS-799), Office of oxic Substances, Environmental Pro-ection Agency, Rm. E-543, 401 M St. W., Washington, DC 20460, and her personal protection measures.

(iii) The provisions of this section d § 763.91, Appendices A, B, C, D of is subpart E of this part, EPA regu-tions contained in 40 CFR Part 763, bpart G, and in 40 CFR Part 61, sub-rt M, and OSHA regulations con-ined in 29 CFR 1926.58.

(iv) Hands-on training in the use of respiratory protection, other personal protection measures, and good work practices.

(3) Local education agency maintenance and custodial staff who have attended EPA-approved asbestos training or received equivalent training for O&M and periodic surveillance activities involving asbestos shall be considered trained for the purposes of this section.

(b) *Periodic surveillance*. (1) At least once every 6 months afte[illegible] management plan is in effect, each local education agency shall conduct periodic surveillance in each building that it leases, owns, or otherwise uses as a school building that contains ACBM or is assumed to contain ACBM.

(2) Each person performing periodic surveillance shall:

(i) Visually inspect all areas that are identified in the management plan as ACBM or assumed ACBM.

(ii) Record the date of the surveillance, his or her name, and any changes in the condition of the materials.

(iii) Submit to the person designated to carry out general local education agency responsibilities under § 763.84 a copy of such record for inclusion in the management plan.

§ 763.93 Management plans.

(a)(1) On or before October 12, 1988, each local education agency shall develop an asbestos management plan for each school, including all buildings that they lease, own, or otherwise use as school buildings, and submit the plan to an Agency designated by the Governor of the State in which the local education agency is located. The plan may be submitted in stages that cover a portion of the school buildings under the authority of the local education agency.

(2) If a building to be used as part of a school is leased or otherwise acquired after October 12, 1988, the local education agency shall include the new building in the management plan for the school prior to its use as a school building. The revised portions of the management plan shall be sub-

mitted to the Agency designated by the Governor.

(3) If a local education agency begins to use a building as a school after October 12, 1988, the local education agency shall submit a management plan for the school to the Agency designated by the Governor prior to its use as a school.

(b) On or before October 17, 1987, the Governor of each State shall notify local education agencies in the State regarding where to submit their management plans. States may establish administrative procedures for reviewing management plans. If the Governor does not disapprove a management plan within 90 days after receipt of the plan, the local education agency shall implement the plan.

(c) Each local education agency must begin implementation of its management plan on or before July 9, 1989, and complete implementation in a timely fashion.

(d) Each local education agency shall maintain and update its management plan to keep it current with ongoing operations and maintenance, periodic surveillance, inspection, reinspection, and response action activities. All provisions required to be included in the management plan under this section shall be retained as part of the management plan, as well as any information that has been revised to bring the plan up-to-date.

(e) The management plan shall be developed by an accredited management planner and shall include:

(1) A list of the name and address of each school building and whether the school building contains friable ACBM, nonfriable ACBM, and friable and nonfriable suspected ACBM assumed to be ACM.

(2) For each inspection conducted before the December 14, 1987:

(i) The date of the inspection.

(ii) A blueprint, diagram, or written description of each school building that identifies clearly each location and approximate square or linear footage of any homogeneous or sampling area where material was sampled for ACM, and, if possible, the exact locations where bulk samples were collected, and the dates of collection.

(iii) A copy of the analyses of any bulk samples, dates of analyses, and a copy of any other laboratory reports pertaining to the analyses.

(iv) A description of any response actions or preventive measures taken to reduce asbestos exposure, including if possible, the names and addresses of all contractors involved, start and completion dates of the work, and results of any air samples analyzed during and upon completion of the work.

(v) A description of assessments, required to be made under § 763.88, of material that was identified before December 14, 1987, as friable ACBM or friable suspected ACBM assumed to be ACM, and the name and signature State of accreditation, and if applicable, accreditation number of each accredited person making the assessments.

(3) For each inspection and reinspection conducted under § 763.85:

(i) The date of the inspection or reinspection and the name and signature, State of accreditation and, if applicable, the accreditation number of each accredited inspector performing the inspection or reinspection.

(ii) A blueprint, diagram, or written description of each school building that identifies clearly each location and approximate square or linear footage of homogeneous areas where material was sampled for ACM, the exact location where each bulk sample was collected, date of collection, homogeneous areas where friable suspected ACBM is assumed to be ACM, and where nonfriable suspected ACBM is assumed to be ACM.

(iii) A description of the manner used to determine sampling locations and the name and signature of each accredited inspector collecting samples, the State of accreditation, and if applicable, his or her accreditation number.

(iv) A copy of the analyses of any bulk samples collected and analyzed, the name and address of any laboratory that analyzed bulk samples, a statement that the laboratory meets the applicable requirements of § 763.87(a), the date of analysis, and the name and signature of the person performing the analysis.

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(v) A description of assessments, required to be made under § 763.88, of all ACBM and suspected ACBM assumed to be ACM, and the name, signature, State of accreditation, and if applicable, accreditation number of each accredited person making the assessments.

(4) The name, address, and telephone number of the person designated under § 763.84 to ensure that the duties of the local education agency are carried out, and the course name, and dates and hours of training taken by that person to carry out the duties.

(5) The recommendations made to the local education agency regarding response actions, under § 763.88(d), the name, signature, State of accreditation of each person making the recommendations, and if applicable, his or her accreditation number.

(6) A detailed description of preventive measures and response actions to be taken, including methods to be used, for any friable ACBM, the locations where such measures and action will be taken, reasons for selecting the response action or preventive measure, and a schedule for beginning and completing each preventive measure and response action.

(7) With respect to the person or persons who inspected for ACBM and who will design or carry out response actions, except for operations and maintenance, with respect to the ACBM, one of the following statements:

(i) If the State has adopted a contractor accreditation program under section 206(b) of Title II of the Act, a statement that the person(s) is accredited under such plan.

(ii) A statement that the local education agency used (or will use) persons who have been accredited by another State which has adopted a contractor accreditation plan under section 206(b) of Title II of the Act or is accredited by an EPA-approved course under section 206(c) of Title II of the Act.

(8) A detailed description in the form of a blueprint, diagram, or in writing of any ACBM or suspected ACBM assumed to be ACM which remains in the school once response actions are undertaken pursuant to § 763.90. This description shall be updated as response actions are completed.

(9) A plan for reinspection under § 763.85, a plan for operations and maintenance activities under § 763.91, and a plan for periodic surveillance under § 763.92, a description of the recommendation made by the management planner regarding additional cleaning under § 763.91(c)(2) as part of an operations and maintenance program, and the response of the local education agency to that recommendation.

(10) A description of steps taken to inform workers and building occupants, or their legal guardians, about inspections, reinspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.

(11) An evaluation of the resources needed to complete response actions successfully and carry out reinspection, operations and maintenance activities, periodic surveillance and training.

(12) With respect to each consultant who contributed to the management plan, the name of the consultant and one of the following statements:

(i) If the State has adopted a contractor accreditation plan under section 206(b) of Title II of the Act, a statement that the consultant is accredited under such plan.

(ii) A statement that the contractor is accredited by another State which has adopted a contractor accreditation plan under section 206(b) of Title II of the Act, or is accredited by an EPA-approved course developed under section 206(c) of Title II of the Act.

(f) A local education agency may require each management plan to contain a statement signed by an accredited management plan developer that such person has prepared or assisted in the preparation of such plan or has reviewed such plan, and that such plan is in compliance with this subpart E. Such statement may not be signed by a person who, in addition to preparing or assisting in preparing the management plan, also implements (or will implement) the management plan.

(g)(1) Upon submission of a management plan to the Governor for review, a local education agency shall keep a copy of the plan in its administrative office. The management plans shall be available, without cost or restriction, for inspection by representatives of EPA and the State, the public, including teachers, other school personnel and their representatives, and parents. The local education agency may charge a reasonable cost to make copies of management plans.

(2) Each local education agency shall maintain in its administrative office a complete, updated copy of a management plan for each school under its administrative control or direction. The management plans shall be available, during normal business hours, without cost or restriction, for inspection by representatives of EPA and the State, the public, including teachers, other school personnel and their representatives, and parents. The local education agency may charge a reasonable cost to make copies of management plans.

(3) Each school shall maintain in its administrative office a complete, updated copy of the management plan for that school. Management plans shall be available for inspection, without cost or restriction, to workers before work begins in any area of a school building. The school shall make management plans available for inspection to representatives of EPA and the State, the public, including parents, teachers, and other school personnel and their representatives within 5 working days after receiving a request for inspection. The school may charge a reasonable cost to make copies of the management plan.

(4) Upon submission of its management plan to the Governor and at least once each school year, the local education agency shall notify in writing parent, teacher, and employee organizations of the availability of management plans and shall include in the management plan a description of the steps taken to notify such organizations, and a dated copy of the notification. In the absence of any such organizations for parents, teachers, or employees, the local education agency shall provide written notice to that relevant group of the availability of management plans and shall include in the management plan a description of the steps taken to notify such groups, and a dated copy of the notification.

(h) Records required under § 763.94 shall be made by local education agencies and maintained as part of the management plan.

(i) Each management plan must contain a true and correct statement, signed by the individual designated by the local education agency under § 763.84, which certifies that the general, local education agency responsibilities, as stipulated by § 763.84, have been met or will be met.

§ 763.94 Recordkeeping.

(a) Records required under this section shall be maintained in a centralized location in the administrative office of both the school and the local education agency as part of the management plan. For each homogeneous area where all ACBM has been removed, the local education agency shall ensure that such records are retained for 3 years after the next reinspection required under § 763.85(b)(1), or for an equivalent period.

(b) For each preventive measure and response action taken for friable and nonfriable ACBM and friable and nonfriable suspected ACBM assumed to be ACM, the local education agency shall provide:

(1) A detailed written description of the measure or action, including methods used, the location where the measure or action was taken, reasons for selecting the measure or action, start and completion dates of the work, names and addresses of all contractors involved, and if applicable, their State of accreditation, and accreditation numbers, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(2) The name and signature of any person collecting any air sample required to be collected at the completion of certain response actions specified by § 763.90(i), the locations where samples were collected, date of collection, the name and address of the laboratory analyzing the samples, the

late of analysis, the results of the
analysis, the method of analysis, the
name and signature of the person per-
orming the analysis, and a statement
hat the laboratory meets the applica-
le requirements of § 763.90(i)(2)(ii).

(c) For each person required to be
rained under § 763.92(a) (1) and (2),
he local education agency shall pro-
ide the person's name and job title,
he date that training was completed
y that person, the location of the
raining, and the number of hours
ompleted in such training.

(d) For each time that periodic sur-
eillance under § 763.92(b) is per-
ormed, the local education agency
hall record the name of each person
erforming the surveillance, the date
f the surveillance, and any changes in
he conditions of the materials.

(e) For each time that cleaning
nder § 763.91(c) is performed, the
cal education agency shall record
e name of each person performing
e cleaning, the date of such clean-
g, the locations cleaned, and the
ethods used to perform such clean-
g.

(f) For each time that operations
d maintenance activities under
63.91(d) are performed, the local
ucation agency shall record the
me of each person performing the
tivity, the start and completion
tes of the activity, the locations
ere such activity occurred, a de-
ription of the activity including pre-
ntive measures used, and if ACBM is
moved, the name and location of
rage or disposal site of the ACM.

g) For each time that major asbes-
activity under § 763.91(e) is per-
med, the local education agency
ll provide the name and signature,
te of accreditation, and if applica-
, the accreditation number of each
son performing the activity, the
rt and completion dates of the ac-
ity, the locations where such activi-
occurred, a description of the activi-
including preventive measures used,
if ACBM is removed, the name
location of storage or disposal site
he ACM.

) For each fiber release episode
ler § 763.91(f), the local education
ncy shall provide the date and loca-
of the episode, the method of
repair, preventive measures or response action taken, the name of each person performing the work, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(Approved by the Office of Management and Budget under control number 2070-0091)

§ 763.95 Warning labels.

(a) The local education agency shall attach a warning label immediately adjacent to any friable and nonfriable ACBM and suspected ACBM assumed to be ACM located in routine maintenance areas (such as boiler rooms) at each school building. This shall include:

(1) Friable ACBM that was responded to by a means other than removal.

(2) ACBM for which no response action was carried out.

(b) All labels shall be prominently displayed in readily visible locations and shall remain posted until the ACBM that is labeled is removed.

(c) The warning label shall read, in print which is readily visible because of large size or bright color, as follows:

CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.

§ 763.97 Compliance and enforcement.

(a) *Compliance with Title II of the Act.* (1) Section 207(a) of Title II of the Act (15 U.S.C. 2647) makes it unlawful for any local education agency to:

(i) Fail to conduct inspections pursuant to section 203(b) of Title II of the Act, including failure to follow procedures and failure to use accredited personnel and laboratories.

(ii) Knowingly submit false information to the Governor regarding any inspection pursuant to regulations under section 203(i) of Title II of the Act.

(iii) Fail to develop a management plan pursuant to regulations under section 203(i) of Title II of the Act.

(2) Section 207(a) of Title II of the Act (15 U.S.C. 2647) also provides that any local education agency which violates any provision of section 207 shall be liable for a civil penalty of not more

than $5,000 for each day during which the violation continues. For the purposes of this subpart, a "violation" means a failure to comply with respect to a single school building.

(b) *Compliance with Title I of the Act.* (1) Section 15(1)(D) of Title I of the Act (15 U.S.C. 2614) makes it unlawful for any person to fail or refuse to comply with any requirement of Title II or any rule promulgated or order issued under Title II. Therefore, any person who violates any requirement of this subpart is in violation of section 15 of Title I of the Act.

(2) Section 15(3) of Title I of the Act (15 U.S.C. 2614) makes it unlawful for any person to fail or refuse to establish or maintain records, submit reports, notices or other information, or permit access to or copying of records, as required by this Act or a rule thereunder.

(3) Section 15(4) (15 U.S.C. 2614) of Title I of the Act makes it unlawful for any person to fail or refuse to permit entry or inspection as required by section 11 of Title I of the Act.

(4) Section 16(a) of Title I of the Act (15 U.S.C. 2615) provides that any person who violates any provision of section 15 of Title I of the Act shall be liable to the United States for a civil penalty in an amount not to exceed $25,000 for each such violation. Each day such a violation continues shall, for purposes of this paragraph, constitute a separate violation of section 15. A local education agency is not liable for any civil penalty under Title I of the Act for failing or refusing to comply with any rule promulgated or order issued under Title II of the Act.

(c) *Criminal penalties.* If any violation committed by any person (including a local education agency) is knowing or willful, criminal penalties may be assessed under section 16(b) of Title I of the Act.

(d) *Injunctive relief.* The Agency may obtain injunctive relief under section 208(b) of Title II of the Act to respond to a hazard which poses an imminent and substantial endangerment to human health or the environment or section 17 (15 U.S.C. 2616) of Title I of the Act to restrain any violation of section 15 of Title I of the Act or to compel the taking of any action required by or under Title I of the Act.

(e) *Citizen complaints.* Any citizen who wishes to file a complaint pursuant to section 207(d) of Title II of the Act should direct the complaint to the Governor of the State or the EPA Asbestos Ombudsman, 401 M Street SW., Washington, DC 20460. The citizen complaint should be in writing and identified as a citizen complaint pursuant to section 207(d) of Title II of TSCA. The EPA Asbestos Ombudsman or the Governor shall investigate and respond to the complaint within a reasonable period of time if the allegations provide a reasonable basis to believe that a violation of the Act has occurred.

(f) *Inspections.* EPA may conduct inspections and review management plans under section 11 of Title I of the Act (15 U.S.C. 2610) to ensure compliance.

§ 763.98 Waiver; delegation to State.

(a) *General.* (1) Upon request from a State Governor and after notice and comment and an opportunity for a public hearing in accordance with paragraphs (b) and (c) of this section, EPA may waive some or all of the requirements of this subpart E if the State has established and is implementing or intends to implement a program of asbestos inspection and management that contains requirements that are at least as stringent as the requirements of this subpart E.

(2) A waiver from any requirement of this subpart E shall apply only to the specific provision for which a waiver has been granted under this section. All requirements of this subpart E shall apply until a waiver is granted under this section.

(b) *Request.* Each request by a Governor to waive any requirement of this subpart E shall be sent with three complete copies of the request to the Regional Administrator for the EPA Region in which the State is located and shall include:

(1) A copy of the State provisions or proposed provisions relating to its program of asbestos inspection and management in schools for which the request is made.

(2)(i) The name of the State agency that is or will be responsible for administering and enforcing the requirements for which a waiver is requested, the names and job titles of responsible officials in that agency, and phone numbers where the officials can be contacted.

(ii) In the event that more than one agency is or will be responsible for administering and enforcing the requirements for which a waiver is requested, a description of the functions to be performed by each agency, how the program will be coordinated by the lead agency to ensure consistency and effective administration in the asbestos inspection and management program within the State, the names and job titles of responsible officials in the agencies, and phone numbers where the officials can be contacted. The lead agency will serve as the central contact point for the EPA.

(3) Detailed reasons, supporting papers, and the rationale for concluding that the State's asbestos inspection and management program provisions for which the request is made are at least as stringent as the requirements of this subpart E.

(4) A discussion of any special situations, problems, and needs pertaining to the waiver request accompanied by an explanation of how the State intends to handle them.

(5) A statement of the resources that the State intends to devote to the administration and enforcement of the provisions relating to the waiver request.

(6) Copies of any specific or enabling State laws (enacted and pending enactment) and regulations (promulgated and pending promulgation) relating o the request, including provisions for ssessing criminal and/or civil penalies.

(7) Assurance from the Governor, he Attorney General, or the legal ounsel of the lead agency that the ead agency or other cooperating agenies have the legal authority necessary o carry out the requirements relating o the request.

(c) *General notice—hearing.* (1) Within 30 days after receipt of a reuest for a waiver, EPA will determine he completeness of the request. If EPA does not request further information within the 30-day period, the request will be deemed complete.

(2) Within 30 days after EPA determines that a request is complete, EPA will issue for publication in the FEDERAL REGISTER a notice that announces receipt of the request, describes the information submitted under paragraph (b) of this section, and solicits written comment from interested members of the public. Comments must be submitted within 60 days.

(3) If, during the comment period, EPA receives a written objection to a Governor's request and a request for a public hearing detailing specific objections to the granting of a waiver, EPA will schedule a public hearing to be held in the affected State after the close of the comment period and will announce the public hearing date in the FEDERAL REGISTER before the date of the hearing. Each comment shall include the name and address of the person submitting the comment.

(d) *Criteria.* EPA may waive some or all of the requirements of subpart E of this part if:

(1) The State's lead agency and other cooperating agencies have the legal authority necessary to carry out the provisions of asbestos inspection and management in schools relating to the waiver request.

(2) The State's program of asbestos inspection and management in schools relating to the waiver request and implementation of the program are or will be at least as stringent as the requirements of this subpart E.

(3) The State has an enforcement mechanism to allow it to implement the program described in the waiver request.

(4) The lead agency and any cooperating agencies have or will have qualified personnel to carry out the provisions relating to the waiver request.

(5) The State will devote adequate resources to the administration and enforcement of the asbestos inspection and management provisions relating to the waiver request.

(6) When specified by EPA, the State gives satisfactory assurances that necessary steps, including specific actions it proposes to take and a time schedule for their accomplishment,

will be taken within a reasonable time to conform with applicable criteria under paragraphs (d) (2) through (4) of this section.

(e) *Decision.* EPA will issue for publication in the FEDERAL REGISTER a notice announcing its decision to grant or deny, in whole or in part, a Governor's request for a waiver from some or all of the requirements of this subpart E within 30 days after the close of the comment period or within 30 days following a public hearing, whichever is applicable. The notice will include the Agency's reasons and rationale for granting or denying the Governor's request. The 30-day period may be extended if mutually agreed upon by EPA and the State.

(f) *Modifications.* When any substantial change is made in the administration or enforcement of a State program for which a waiver was granted under this section, a responsible official in the lead agency shall submit such changes to EPA.

(g) *Reports.* The lead agency in each State that has been granted a waiver by EPA from any requirement of subpart E of this part shall submit a report to the Regional Administrator for the Region in which the State is located at least once every 12 months to include the following information:

(1) A summary of the State's implementation and enforcement activities during the last reporting period relating to provisions waived under this section, including enforcement actions taken.

(2) Any changes in the administration or enforcement of the State program implemented during the last reporting period.

(3) Other reports as may be required by EPA to carry out effective oversight of any requirement of this subpart E that was waived under this section.

(h) *Oversight.* EPA may periodically evaluate the adequacy of a State's implementation and enforcement of and resources devoted to carrying out requirements relating to the waiver. This evaluation may include, but is not limited to, site visits to local education agencies without prior notice to the State.

(i) *Informal conference.* (1) EPA may request that an informal conference be held between appropriate State and EPA officials when EPA has reason to believe that a State has failed to:

(i) Substantially comply with the terms of any provision that was waived under this section.

(ii) Meet the criteria under paragraph (d) of this section, including the failure to carry out enforcement activities or act on violations of the State program.

(2) EPA will:

(i) Specify to the State those aspects of the State's program believed to be inadequate.

(ii) Specify to the State the facts that underlie the belief of inadequacy.

(3) If EPA finds, on the basis of information submitted by the State at the conference, that deficiencies did not exist or were corrected by the State, no further action is required.

(4) Where EPA finds that deficiencies in the State program exist, a plan to correct the deficiencies shall be negotiated between the State and EPA. The plan shall detail the deficiencies found in the State program, specify the steps the State has taken or will take to remedy the deficiencies, and establish a schedule for each remedial action to be initiated.

(j) *Rescission.* (1) If the State fails to meet with EPA or fails to correct deficiencies raised at the informal conference, EPA will deliver to the Governor of the State and a responsible official in the lead agency a written notice of its intent to rescind, in whole or part, the waiver.

(2) EPA will issue for publication in the FEDERAL REGISTER a notice that announces the rescission of the waiver, describes those aspects of the State's program determined to be inadequate, and specifies the facts that underlie the findings of inadequacy.

§ 763.99 Exclusions.

(a) A local education agency shall not be required to perform an inspection under § 763.85(a) in any sampling area as defined in 40 CFR 763.103 or homogeneous area of a school building where:

(1) An accredited inspector has de-
rmined that, based on sampling
ecords, friable ACBM was identified
that homogeneous or sampling area
uring an inspection conducted before
ecember 14, 1987. The inspector shall
gn and date a statement to that
fect with his or her State of accredi-
tion and if applicable, accreditation
umber and, within 30 days after such
etermination, submit a copy of the
atement to the person designated
nder § 763.84 for inclusion in the
anagement plan. However, an ac-
edited inspector shall assess the fri-
le ACBM under § 763.88.

2) An accredited inspector has de-
rmined that, based on sampling
cords, nonfriable ACBM was identi-
d in that homogeneous or sampling
ea during an inspection conducted
fore December 14, 1987. The inspec-
r shall sign and date a statement to
at effect with his or her State of ac-
editation and if applicable, accredi-
ion number and, within 30 days
er such determination, submit a
y of the statement to the person
signated under § 763.84 for inclusion
the management plan. However, an
redited inspector shall identify
ether material that was nonfriable
s become friable since that previous
pection and shall assess the newly-
able ACBM under § 763.88.

3) Based on sampling records and
pection records, an accredited in-
ctor has determined that no ACBM
present in the homogeneous or sam-
ng area and the records show that
area was sampled, before Decem-
14, 1987 in substantial compliance
h § 763.85(a), which for purposes of
s section means in a random
nner and with a sufficient number
samples to reasonably ensure that
area is not ACBM.

) The accredited inspector shall
and date a statement, with his or
State of accreditation and if appli-
le, accreditation number that the
nogeneous or sampling area deter-
ed not to be ACBM was sampled in
stantial compliance with
3.85(a).

) Within 30 days after the inspec-
s determination, the local educa-
agency shall submit a copy of the
ector's statement to the EPA Regional Office and shall include the statement in the management plan for that school.

(4) The lead agency responsible for asbestos inspection in a State that has been granted a waiver from § 763.85(a) has determined that, based on sampling records and inspection records, no ACBM is present in the homogeneous or sampling area and the records show that the area was sampled before December 14, 1987, in substantial compliance with § 763.85(a). Such determination shall be included in the management plan for that school.

(5) An accredited inspector has determined that, based on records of an inspection conducted before December 14, 1987, suspected ACBM identified in that homogeneous or sampling area is assumed to be ACM. The inspector shall sign and date a statement to that effect, with his or her State of accreditation and if applicable, accreditation number and, within 30 days of such determination, submit a copy of the statement to the person designated under § 763.84 for inclusion in the management plan. However, an accredited inspector shall identify whether material that was nonfriable suspected ACBM assumed to be ACM has become friable since the previous inspection and shall assess the newly friable material and previously identified friable suspected ACBM assumed to be ACM under § 763.88.

(6) Based on inspection records and contractor and clearance records, an accredited inspector has determined that no ACBM is present in the homogeneous or sampling area where asbestos removal operations have been conducted before December 14, 1987, and shall sign and date a statement to that effect and include his or her State of accreditation and, if applicable, accreditation number. The local education agency shall submit a copy of the statement to the EPA Regional Office and shall include the statement in the management plan for that school.

(7) An architect or project engineer responsible for the construction of a new school building built after October 12, 1988, or an accredited inspector signs a statement that no ACBM was specified as a building material in any construction document for the build-

ing, or, to the best of his or her knowledge, no ACBM was used as a building material in the building. The local education agency shall submit a copy of the signed statement of the architect, project engineer, or accredited inspector to the EPA Regional Office and shall include the statement in the management plan for that school.

(b) The exclusion, under paragraphs (a) (1) through (4) of this section, from conducting the inspection under § 763.85(a) shall apply only to homogeneous or sampling areas of a school building that were inspected and sampled before October 17, 1987. The local education agency shall conduct an inspection under § 763.85(a) of all areas inspected before October 17, 1987, that were not sampled or were not assumed to be ACM.

(c) If ACBM is subsequently found in a homogeneous or sampling area of a local education agency that had been identified as receiving an exclusion by an accredited inspector under paragraphs (a) (3), (4), (5) of this section, or an architect, project engineer or accredited inspector under paragraph (a)(7) of this section, the local education agency shall have 180 days following the date of identification of ACBM to comply with this subpart E.

APPENDIX A TO SUBPART E—INTERIM TRANSMISSION ELECTRON MICROSCOPY ANALYTICAL METHODS—MANDATORY AND NONMANDATORY—AND MANDATORY SECTION TO DETERMINE COMPLETION OF RESPONSE ACTIONS

I. Introduction

The following appendix contains three units. The first unit is the mandatory transmission electron microscopy (TEM) method which all laboratories must follow; it is the minimum requirement for analysis of air samples for asbestos by TEM. The mandatory method contains the essential elements of the TEM method. The second unit contains the complete non-mandatory method. The non-mandatory method supplements the mandatory method by including additional steps to improve the analysis. EPA recommends that the non-mandatory method be employed for analyzing air filters; however, the laboratory may choose to employ the mandatory method. The non-mandatory method contains the same minimum requirements as are outlined in the mandatory method. Hence, laboratori may choose either of the two methods f analyzing air samples by TEM.

The final unit of this Appendix A to su part E defines the steps which must taken to determine completion of respon actions. This unit is mandatory.

II. Mandatory Transmission Electron Microscopy Method

A. Definitions of Terms

1. "Analytical sensitivity"—Airborne a bestos concentration represented by eac fiber counted under the electron micr scope. It is determined by the air volum collected and the proportion of the filter e amined. This method requires that the an lytical sensitivity be no greater than 0.00 structures/cm^3.

2. "Asbestiform"—A specific type of mi eral fibrosity in which the fibers and fibri possess high tensile strength and flexibilit

3. "Aspect ratio"—A ratio of the length t the width of a particle. Minimum aspe ratio as defined by this method is equal t or greater than 5:1.

4. "Bundle"—A structure composed o three or more fibers in a parallel arrange ment with each fiber closer than one fibe diameter.

5. "Clean area"—A controlled enviro ment which is maintained and monitored t assure a low probability of asbestos con tamination to materials in that space. Clea areas used in this method have HEPA fi tered air under positive pressure and are ca pable of sustained operation with an ope laboratory blank which on subsequent ana ysis has an average of less than 18 stru tures/mm^2 in an area of 0.057 mm^2 (nomi nally 10 200-mesh grid openings) and a max imum of 53 structures/mm^2 for any singl preparation for that same area.

6. "Cluster"—A structure with fibers in random arrangement such that all fiber are intermixed and no single fiber is isolate from the group. Groupings must have mor than two intersections.

7. "ED"—Electron diffraction.

8. "EDXA"—Energy dispersive X-ray analysis.

9. "Fiber"—A structure greater than or equal to 0.5 μm in length with an aspect ratio (length to width) of 5:1 or greater and having substantially parallel sides.

10. "Grid"—An open structure for mounting on the sample to aid in its examination in the TEM. The term is used here to denote a 200-mesh copper lattice approximately 3 mm in diameter.

11. "Intersection"—Nonparallel touching or crossing of fibers, with the projection having an aspect ratio of 5:1 or greater.

12. "Laboratory sample coordinator"—That person responsible for the conduct of

sample handling and the certification of the testing procedures.

13. "Filter background level"—The concentration of structures per square millimeter of filter that is considered indistinguishable from the concentration measured on a blank (filters through which no air has been drawn). For this method the filter background level is defined as 70 structures/mm².

14. "Matrix"—Fiber or fibers with one end free and the other end embedded in or hidden by a particulate. The exposed fiber must meet the fiber definition.

15. "NSD"—No structure detected.

16. "Operator"—A person responsible for the TEM instrumental analysis of the sample.

17. "PCM"—Phase contrast microscopy.

18. "SAED"—Selected area electron diffraction.

19. "SEM"—Scanning electron microscope.

20. "STEM"—Scanning transmission electron microscope.

21. "Structure"—a microscopic bundle, cluster, fiber, or matrix which may contain asbestos.

22. "S/cm³"—Structures per cubic centimeter.

23. S/mm²"—Structures per square millimeter.

24. "TEM"—Transmission electron microscope.

B. Sampling

1. The sampling agency must have written quality control procedures and documents which verify compliance.

2. Sampling operations must be performed by qualified individuals completely independent of the abatement contractor to avoid possible conflict of interest (References 1, 2, 3, and 5 of Unit II.J.).

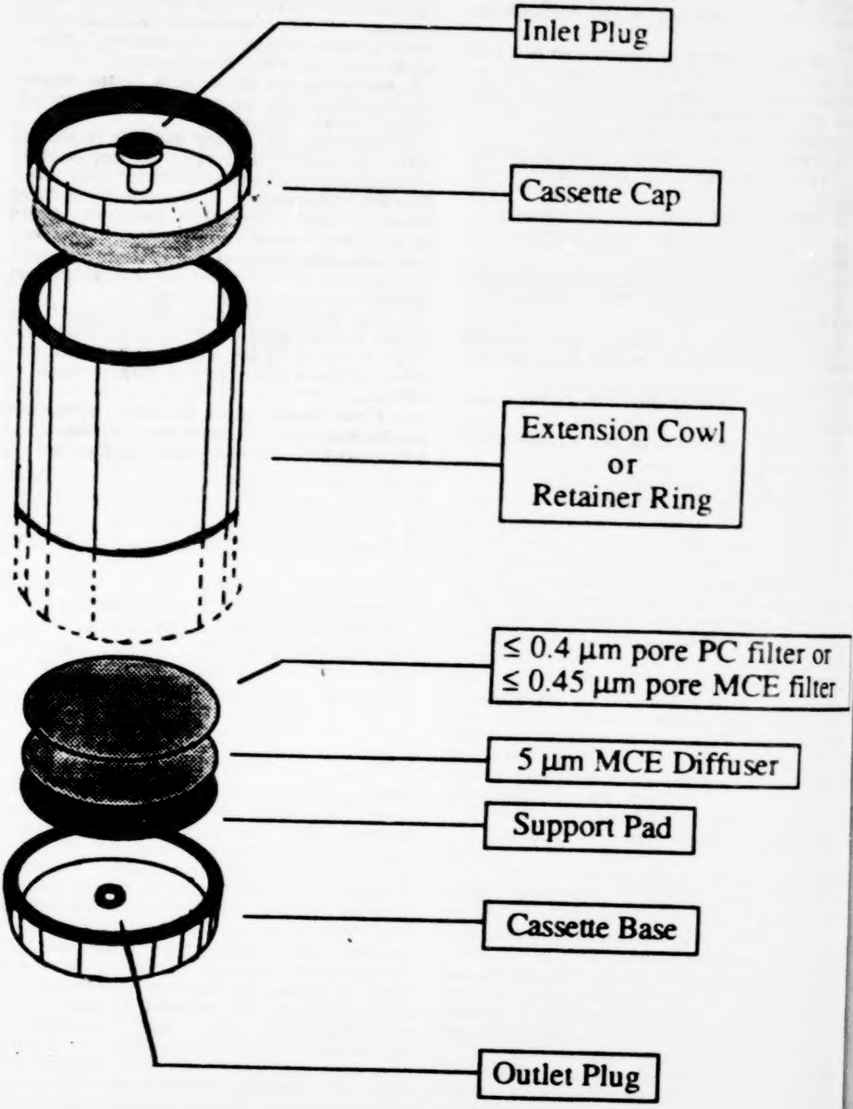
3. Sampling for airborne asbestos following an abatement action must use commercially available cassettes.

4. Prescreen the loaded cassette collection filters to assure that they do not contain concentrations of asbestos which may interfere with the analysis of the sample. A filter blank average of less than 18 s/mm² in an area of 0.057 mm² (nominally 10 200-mesh grid openings) and a single preparation with a maximum of 53 s/mm² for that same area is acceptable for this method.

5. Use sample collection filters which are either polycarbonate having a pore size less than or equal to 0.4 µm or mixed cellulose ester having a pore size less than or equal to 0.45 µm.

6. Place these filters in series with a 5.0 µm backup filter (to serve as a diffuser) and a support pad. See the following Figure 1:

FIGURE 1--SAMPLING CASSETTE CONFIGURATION


Inlet Plug
Cassette Cap
Extension Cowl or Retainer Ring
≤ 0.4 µm pore PC filter or ≤ 0.45 µm pore MCE filter
5 µm MCE Diffuser
Support Pad
Cassette Base
Outlet Plug

7. Reloading of used cassettes is not permitted.

8. Orient the cassette downward at approximately 45 degrees from the horizontal.

9. Maintain a log of all pertinent sampling information.

10. Calibrate sampling pumps and their flow indicators over the range of their intended use with a recognized standard. Assemble the sampling system with a representative filter (not the filter which will be used in sampling) before and after the sampling operation.

11. Record all calibration information.

12. Ensure that the mechanical vibrations from the pump will be minimized to prevent transferral of vibration to the cassette.

13. Ensure that a continuous smooth flow of negative pressure is delivered by the pump by damping out any pump action fluctuations if necessary.

14. The final plastic barrier around the abatement area remains in place for the sampling period.

15. After the area has passed a thorough visual inspection, use aggressive sampling conditions to dislodge any remaining dust. (See suggested protocol in Unit III.B.7.d.)

16. Select an appropriate flow rate equal to or greater than 1 liter per minute (L/min) or less than 10 L/min for 25 mm cassettes. Larger filters may be operated at proportionally higher flow rates.

17. A minimum of 13 samples are to be collected for each testing site consisting of the following:

a. A minimum of five samples per abatement area.

b. A minimum of five samples per ambient area positioned at locations representative of the air entering the abatement site.

c. Two field blanks are to be taken by removing the cap for not more than 30 seconds and replacing it at the time of sampling before sampling is initiated at the following places:

i. Near the entrance to each abatement area.

ii. At one of the ambient sites. (DO NOT leave the field blanks open during the sampling period.)

d. A sealed blank is to be carried with each sample set. This representative cassette is not to be opened in the field.

18. Perform a leak check of the sampling system at each indoor and outdoor sampling site by activating the pump with the closed sampling cassette in line. Any flow indicates a leak which must be eliminated before initiating the sampling operation.

19. The following Table I specifies volume ranges to be used:

TABLE 1--NUMBER OF 200 MESH EM GRID OPENINGS ($0.0057\ MM^2$) THAT NEED TO BE ANALYZED TO MAINTAIN SENSITIVITY OF 0.005 STRUCTURES/CC BASED ON VOLUME AND EFFECTIVE FILTER AREA

Effective Filter Area
385 sq mm

	Volume (liters)	# of grid openings
	560	*24*
	600	23
	700	19
	800	17
	900	15
	1,000	14
	1,100	12
Recommended Volume Range	**1,200**	**11**
	1,300	**10**
	1,400	**10**
	1,500	**9**
	1,600	**8**
	1,700	**8**
	1,800	**8**
	1,900	7
	2,000	7
	2,100	6
	2,200	6
	2,300	6
	2,400	6
	2,500	5
	2,600	5
	2,700	5
	2,800	5
	2,900	5
	3,000	5
	3,100	4
	3,200	4
	3,300	4
	3,400	4
	3,500	4
	3,600	4
	3,700	4
	3,800	4

Effective Filter Area
855 sq mm

Volume (liters)	# of grid openings	
1,250	*24*	
1,300	23	
1,400	21	
1,600	19	
1,800	17	
2,000	15	
2,200	14	
2,400	13	
2,600	12	
2,800	**11**	Recommende Volume Range
3,000	**10**	
3,200	**9**	
3,400	**9**	
3,600	**8**	
3,800	**8**	
4,000	**8**	
4,200	7	
4,400	7	
4,600	7	
4,800	6	
5,000	6	
5,200	6	
5,400	6	
5,600	5	
5,800	5	
6,000	5	
6,200	5	
6,400	5	
6,600	5	
6,800	4	
7,000	4	
7,200	4	
7,400	4	
7,600	4	

Note minimum volumes required:
25 mm : 560 liters
37 mm : 1250 liters

Filter diameter of 25 mm = effective area of 385 sq mm
Filter diameter of 37 mm = effective area of 855 sq mm

20. Ensure that the sampler is turned upright before interrupting the pump flow.

21. Check that all samples are clearly labeled and that all pertinent information has been enclosed before transfer of the samples to the laboratory.

22. Ensure that the samples are stored in a secure and representative location.

23. Do not change containers if portions of these filters are taken for other purposes.

24. A summary of Sample Data Quality Objectives is shown in the following Table II:

TABLE II--SUMMARY OF SAMPLING AGENCY DATA QUALITY OBJECTIVES

This table summarizes the data quality objectives from the performance of this method in terms of precision, accuracy, completeness, representativeness, and comparability. These objectives are assured by the periodic control checks and reference checks listed here and described in the text of the method.

Unit Operation	QC Check	Frequency	Conformance Expectation
Sampling materials	Sealed blank	1 per I/O site	95%
Sample procedures	Field blanks	2 per I/O site	95%
	Pump calibration	Before and after each field series	90%
Sample custody	Review of chain-of-custody record	Each sample	95% complete
Sample shipment	Review of sending report	Each sample	95% complete

C. Sample Shipment

Ship bulk samples to the analytical laboratory in a separate container from air samples.

D. Sample Receiving

1. Designate one individual as sample coordinator at the laboratory. While that individual will normally be available to receive samples, the coordinator may train and supervise others in receiving procedures for those times when he/she is not available.

2. Bulk samples and air samples delivered to the analytical laboratory in the same container shall be rejected.

E. Sample Preparation

1. All sample preparation and analysis shall be performed by a laboratory independent of the abatement contractor.

2. Wet-wipe the exterior of the cassettes to minimize contamination possibilities before taking them into the clean room facility.

3. Perform sample preparation in a well-equipped clean facility.

NOTE: The clean area is required to have the following minimum characteristics. The area or hood must be capable of maintaining a positive pressure with make-up air being HEPA-filtered. The cumulative analytical blank concentration must average less than 18 s/mm² in an area of 0.057 mm² (nominally 10 200-mesh grid openings) and a single preparation with a maximum of 53 s/mm² for that same area.

4. Preparation areas for air samples must not only be separated from preparation areas for bulk samples, but they must be prepared in separate rooms.

5. Direct preparation techniques are required. The object is to produce an intact film containing the particulates of the filter surface which is sufficiently clear for TEM analysis.

a. TEM Grid Opening Area measurement must be done as follows:

i. The filter portion being used for sample preparation must have the surface collapsed using an acetone vapor technique.

ii. Measure 20 grid openings on each of 20 random 200-mesh copper grids by placing a grid on a glass and examining it under the PCM. Use a calibrated graticule to measure the average field diameters. From the data, calculate the field area for an average grid opening.

iii. Measurements can also be made on the TEM at a properly calibrated low magnification or on an optical microscope at a magnification of approximately 400X by using an eyepiece fitted with a scale that has been calibrated against a stage micrometer. Optical microscopy utilizing manual or automated procedures may be used providing instrument calibration can be verified.

b. TEM specimen preparation from polycarbonate (PC) filters. Procedures as described in Unit III.G. or other equivalent methods may be used.

c. TEM specimen preparation from mixed cellulose ester (MCE) filters.

i. Filter portion being used for sample preparation must have the surface collapsed using an acetone vapor technique or the Burdette procedure (Ref. 7 of Unit II.J.)

ii. Plasma etching of the collapsed filter is required. The microscope slide to which the collapsed filter pieces are attached is placed in a plasma asher. Because plasma ashers vary greatly in their performance, both from unit to unit and between different positions in the asher chamber, it is difficult to specify the conditions that should be used. Insufficient etching will result in a failure to expose embedded filters, and too much etching may result in loss of particulate from the surface. As an interim measure, it is recommended that the time for ashing of a known weight of a collapsed filter be established and that the etching rate be calculated in terms of micrometers per second. The actual etching time used for the particulate asher and operating conditions will then be set such that a 1-2 µm (10 percent) layer of collapsed surface will be removed.

iii. Procedures as described in Unit III. or other equivalent methods may be used to prepare samples.

F. TEM Method

1. An 80-120 kV TEM capable of performing electron diffraction with a fluorescent screen inscribed with calibrated gradations is required. If the TEM is equipped with EDXA it must either have a STEM attachment or be capable of producing a spot less than 250 nm in diameter at crossover. The microscope shall be calibrated routinely for magnification and camera constant.

2. *Determination of Camera Constant and ED Pattern Analysis.* The camera length of the TEM in ED operating mode must be calibrated before ED patterns on unknown samples are observed. This can be achieved by using a carbon-coated grid on which a thin film of gold has been sputtered or evaporated. A thin film of gold is evaporated on the specimen TEM grid to obtain zone-axis ED patterns superimposed with a ring pattern from the polycrystalline gold film. In practice, it is desirable to optimize the thickness of the gold film so that only one or two sharp rings are obtained on the superimposed ED pattern. Thicker gold film would normally give multiple gold rings, but it will tend to mask weaker diffraction spots from the unknown fibrous particulate. Since the unknown d-spacings of most interest in

asbestos analysis are those which lie closest to the transmitted beam, multiple gold rings are unnecessary on zone-axis ED patterns. An average camera constant using multiple gold rings can be determined. The camera constant is one-half the diameter of the rings times the interplanar spacing of the ring being measured.

3. *Magnification Calibration.* The magnification calibration must be done at the fluorescent screen. The TEM must be calibrated at the grid opening magnification (if used) and also at the magnification used for fiber counting. This is performed with a cross grating replica (e.g., one containing 2,160 lines/mm). Define a field of view on the fluorescent screen either by markings or physical boundaries. The field of view must be measurable or previously inscribed with a scale or concentric circles (all scales should be metric). A logbook must be maintained, and the dates of calibration and the values obtained must be recorded. The frequency of calibration depends on the past history of the particular microscope. After any maintenance of the microscope that involved adjustment of the power supplied to the lenses or the high-voltage system or the mechanical disassembly of the electron optical column apart from filament exchange, the magnification must be recalibrated. Before the TEM calibration is performed, the analyst must ensure that the cross grating replica is placed at the same distance from the objective lens as the specimens are. For instruments that incorporate an eucentric tilting specimen stage, all specimens and the cross grating replica must be placed at the eucentric position.

4. While not required on every microscope in the laboratory, the laboratory must have either one microscope equipped with energy dispersive X-ray analysis or access to an equivalent system on a TEM in another laboratory.

5. Microscope settings: 80-120 kV, grid assessment 250-1,000X, then 15,000-20,000X screen magnification for analysis.

6. Approximately one-half (0.5) of the predetermined sample area to be analyzed shall be performed on one sample grid preparation and the remaining half on a second sample grid preparation.

7. Individual grid openings with greater than 5 percent openings (holes) or covered with greater than 25 percent particulate matter or obviously having nonuniform loading must not be analyzed.

8. Reject the grid if:

a. Less than 30 percent of the grid openings covered by the replica are intact.

b. The replica is doubled or folded.

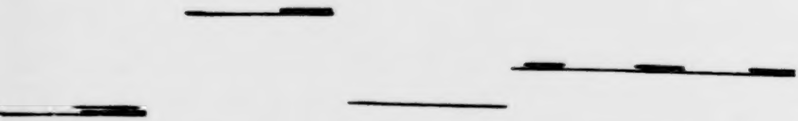
c. The replica is too dark because of incomplete dissolution of the filter.

9. *Recording Rules.*

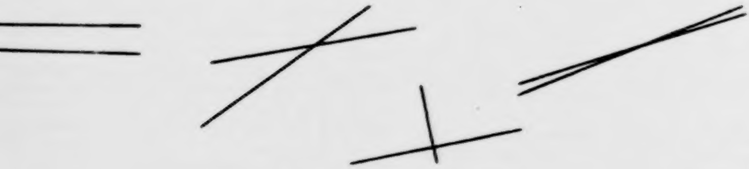
a. Any continuous grouping of particles in which an asbestos fiber with an aspect ratio greater than or equal to 5:1 and a length greater than or equal to 0.5 µm is detected shall be recorded on the count sheet. These will be designated asbestos structures and will be classified as fibers, bundles, clusters or matrices. Record as individual fibers any contiguous grouping having 0, 1, or 2 definable intersections. Groupings having more than 2 intersections are to be described as cluster or matrix. An intersection is a nonparallel touching or crossing of fibers, with the projection having an aspect ratio of 5:1 or greater. See the following Figure 2:

FIGURE 2--COUNTING GUIDELINES USED IN
DETERMINING ASBESTOS STRUCTURES

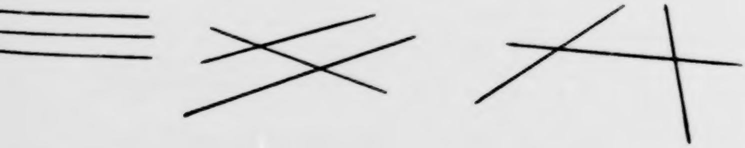
ount as 1 fiber; 1 Structure; no intersections.



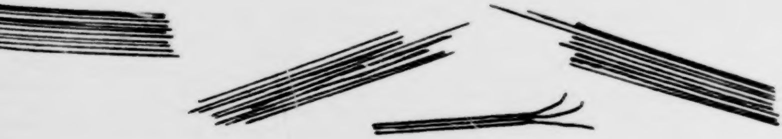
unt as 2 fibers if space between fibers is greater than width of 1 fiber
iameter or number of intersections is equal to or less than 1.



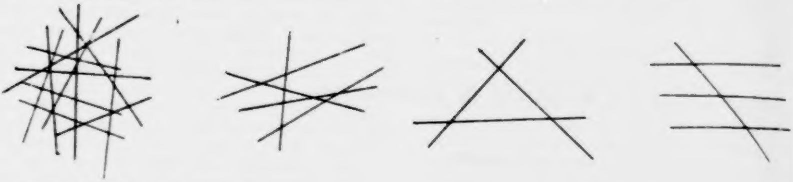
unt as 3 structures if space between fibers is greater than width of 1 fiber
iameter or if the number of intersections is equal to or less than 2.



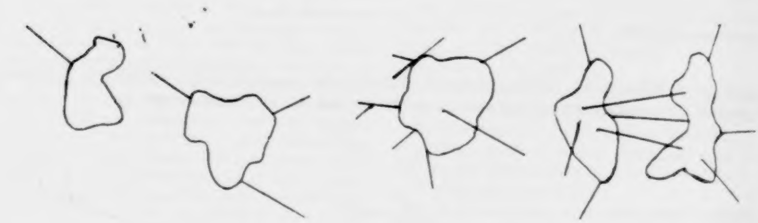
unt bundles as 1 structure; 3 or more parallel fibrils less
an 1 fiber diameter separation.



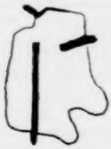
Count clusters as 1 structure; fibers having greater than or equal to 3 intersections.



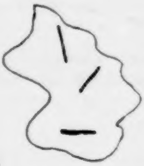
Count matrix as 1 structure.



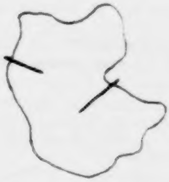
DO NOT COUNT AS STRUCTURES:



Fiber protrusion
<5:1 Aspect Ratio



No fiber protusion



Fiber protrusion
<0.5 micrometer

— <0.5 micrometer in length
▬ <5:1 Aspect Ratio

i. *Fiber.* A structure having a minimum length greater than or equal to 0.5 μm and an aspect ratio (length to width) of 5:1 or greater and substantially parallel sides. Note the appearance of the end of the fiber, i.e., whether it is flat, rounded or dovetailed.

ii. *Bundle.* A structure composed of three or more fibers in a parallel arrangement with each fiber closer than one fiber diameter.

iii. *Cluster.* A structure with fibers in a random arrangement such that all fibers are intermixed and no single fiber is isolated from the group. Groupings must have more than two intersections.

iv. *Matrix.* Fiber or fibers with one end free and the other end embedded in or hidden by a particulate. The exposed fiber must meet the fiber definition.

b. Separate categories will be maintained for fibers less than 5 μm and for fibers equal to or greater than 5 μm in length.

c. Record NSD when no structures are detected in the field.

d. Visual identification of electron diffraction (ED) patterns is required for each asbestos structure counted which would cause the analysis to exceed the 70 s/mm^2 concentration. (Generally this means the first four fibers identified as asbestos must exhibit an identifiable diffraction pattern for chrysotile or amphibole.)

e. The micrograph number of the recorded diffraction patterns must be reported to the client and maintained in the laboratory's quality assurance records. In the event that examination of the pattern by a qualified individual indicates that the pattern has been misidentified visually, the client shall be contacted.

f. Energy Dispersive X-ray Analysis (EDXA) is required of all amphiboles which would cause the analysis results to exceed the 70 s/mm^2 concentration. (Generally speaking, the first 4 amphiboles would require EDXA.)

g. If the number of fibers in the nonasbestos class would cause the analysis to exceed the 70 s/mm^2 concentration, the fact that they are not asbestos must be confirmed by EDXA or measurement of a zone axis diffraction pattern.

h. Fibers classified as chrysotile must be identified by diffraction or X-ray analysis and recorded on a count sheet. X-ray analysis alone can be used only after 70 s/mm^2 have been exceeded for a particular sample.

i. Fibers classified as amphiboles must be identified by X-ray analysis and electron diffraction and recorded on the count sheet. (X-ray analysis alone can be used only after 70 s/mm^2 have been exceeded for a particular sample.)

j. If a diffraction pattern was recorded on film, record the micrograph number on the count sheet.

k. If an electron diffraction was attempted but no pattern was observed, record N on the count sheet.

l. If an EDXA spectrum was attempted but not observed, record N on the count sheet.

m. If an X-ray analysis spectrum is stored, record the file and disk number on the count sheet.

10. Classification Rules.

a. *Fiber.* A structure having a minimum length greater than or equal to 0.5 μm and an aspect ratio (length to width) of 5:1 or greater and substantially parallel sides. Note the appearance of the end of the fiber, i.e., whether it is flat, rounded or dovetailed.

b. *Bundle.* A structure composed of three or more fibers in a parallel arrangement with each fiber closer than one fiber diameter.

c. *Cluster.* A structure with fibers in a random arrangement such that all fibers are intermixed and no single fiber is isolated from the group. Groupings must have more than two intersections.

d. *Matrix.* Fiber or fibers with one end free and the other end embedded in or hidden by a particulate. The exposed fiber must meet the fiber definition.

11. After finishing with a grid, remove it from the microscope, and replace it in the appropriate grid holder. Sample grids must be stored for a minimum of 1 year from the date of the analysis; the sample cassette must be retained for a minimum of 30 days by the laboratory or returned at the client's request.

G. Sample Analytical Sequence

1. Under the present sampling requirements a minimum of 13 samples is to be collected for the clearance testing of an abatement site. These include five abatement area samples, five ambient samples, two field blanks, and one sealed blank.

2. Carry out visual inspection of work site prior to air monitoring.

3. Collect a minimum of 5 air samples inside the work site and 5 samples outside the work site. The indoor and outdoor samples shall be taken during the same time period.

4. Remaining steps in the analytical sequence are contained in Unit IV of this Appendix.

H. Reporting

1. The following information must be reported to the client for each sample analyzed:

a. Concentration in structures per square millimeter and structures per cubic centimeter.

b. Analytical sensitivity used for the analysis.

c. Number of asbestos structures.

d. Area analyzed.

e. Volume of air sampled (which must be initially supplied to lab by client).

f. Copy of the count sheet must be included with the report.

g. Signature of laboratory official to indicate that the laboratory met specifications of the method.

h. Report form must contain official laboratory identification (e.g., letterhead).

i. Type of asbestos.

I. Quality Control/Quality Assurance Procedures (Data Quality Indicators)

Monitoring the environment for airborne asbestos requires the use of sensitive sampling and analysis procedures. Because the test is sensitive, it may be influenced by a variety of factors. These include the supplies used in the sampling operation, the performance of the sampling, the preparation of the grid from the filter and the actual examination of this grid in the microscope. Each of these unit operations must produce a product of defined quality if the analytical result is to be a reliable and meaningful test result. Accordingly, a series of control checks and reference standards are to be performed along with the sample analysis as indicators that the materials used are adequate and the operations are within acceptable limits. In this way, the quality of the data is defined and the results are of known value. These checks and tests also provide timely and specific warning of any problems which might develop within the sampling and analysis operations. A description of these quality control/quality assurance procedures is summarized in the following Table III:

TABLE III--SUMMARY OF LABORATORY DATA QUALITY OBJECTIVES

Unit Operation	QC Check	Frequency	Conformance Expectation
Sample receiving	Review of receiving report	Each sample	95% complete
Sample custody	Review of chain-of-custody record	Each sample	95% complete
Sample preparation	Supplies and reagents	On receipt	Meet specs. or reject
	Grid opening size	20 openings/20 grids/lot of 1000 or 1 opening/sample	100%
	Special clean area monitoring	After cleaning or service	Meet specs or reclean
	Laboratory blank	1 per prep series or 10%	Meet specs. or reanalyze series
	Plasma etch blank	1 per 20 samples	75%
	Multiple preps (3 per sample)	Each sample	One with cover of 15 complete grid sqs.
Sample analysis	System check	Each day	Each day
	Alignment check	Each day	Each day
	Magnification calibration with low and high standards	Each month or after service	95%
	ED calibration by gold standard	Weekly	95%
	EDS calibration by copper line	Daily	95%
Performance check	Laboratory blank (measure of cleanliness)	Prep 1 per series or 10% read 1 per 25 samples	Meet specs or reanalyze series
	Replicate counting (measure of precision)	1 per 100 samples	1.5 x Poisson Std. Dev.
	Duplicate analysis (measure of reproducibility)	1 per 100 samples	2 x Poisson Std. Dev.
	Known samples of typical materials (working standards)	Training and for comparison with unknowns	100%
	Analysis of NBS SRM 1876 and/or RM 8410 (measure of accuracy and comparability)	1 per analyst per year	1.5 x Poisson Std. Dev.
	Data entry review (data validation and measure of completeness)	Each sample	95%
	Record and verify ID electron diffraction pattern of structure	1 per 5 samples	80% accuracy
Calculations and data reduction	Hand calculation of automated data reduction procedure or independent recalculation of hand-calculated data	1 per 100 samples	85%

1. When the samples arrive at the laboratory, check the samples and documentation for completeness and requirements before initiating the analysis.

2. Check all laboratory reagents and supplies for acceptable asbestos background levels.

3. Conduct all sample preparation in a clean room environment monitored by laboratory blanks. Testing with blanks must also be done after cleaning or servicing the room.

4. Prepare multiple grids of each sample.

5. Provide laboratory blanks with each sample batch. Maintain a cumulative average of these results. If there are more than 53 fibers/mm^2 per 10 200-mesh grid openings, the system must be checked for possible sources of contamination.

6. Perform a system check on the transmission electron microscope daily.

7. Make periodic performance checks of magnification, electron diffraction and energy dispersive X-ray systems as set forth in Table III under Unit II.I.

8. Ensure qualified operator performance by evaluation of replicate analysis and standard sample comparisons as set forth in Table III under Unit II.I.

9. Validate all data entries.

10. Recalculate a percentage of all computations and automatic data reduction steps as specified in Table III under Unit II.I.

11. Record an electron diffraction pattern of one asbestos structure from every five samples that contain asbestos. Verify the identification of the pattern by measurement or comparison of the pattern with patterns collected from standards under the same conditions. The records must also demonstrate that the identification of the pattern has been verified by a qualified individual and that the operator who made the identification is maintaining at least an 80 percent correct visual identification based on his measured patterns.

12. Appropriate logs or records must be maintained by the analytical laboratory verifying that it is in compliance with the mandatory quality assurance procedures.

J. References

For additional background information on this method, the following references should be consulted.

1. "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024, June 1985.

2. "Measuring Airborne Asbestos Following an Abatement Action," USEPA, Office of Toxic Substances, EPA 600/4-85-049, 1985.

3. Small, John and E. Steel. Asbestos Standards: Materials and Analytical Methods. N.B.S. Special Publication 619, 1982.

4. Campbell, W.J., R.L. Blake, L.L. Brown, E.E. Cather, and J.J. Sjoberg. Selected Silicate Minerals and Their Asbestiform Varieties. Information Circular 8751, U.S. Bureau of Mines, 1977.

5. Quality Assurance Handbook for Air Pollution Measurement System. Ambient Air Methods, EPA 600/4-77-027a, USEPA, Office of Research and Development, 1977.

6. Method 2A: Direct Measurement of Gas Volume through Pipes and Small Ducts. 40 CFR Part 60 Appendix A.

7. Burdette, G.J., Health & Safety Exec. Research & Lab. Services Div., London, "Proposed Analytical Method for Determination of Asbestos in Air."

8. Chatfield, E.J., Chatfield Tech. Cons., Ltd., Clark, T., PEI Assoc., "Standard Operating Procedure for Determination of Airborne Asbestos Fibers by Transmission Electron Microscopy Using Polycarbonate Membrane Filters," WERL SOP 87-1, March 5, 1987.

9. NIOSH Method 7402 for Asbestos Fibers, 12-11-86 Draft.

10. Yamate, G., Agarwall, S.C., Gibbons, R.D., IIT Research Institute, "Methodology for the Measurement of Airborne Asbestos by Electron Microscopy," Draft report, USEPA Contract 68-02-3266, July 1984.

11. "Guidance to the Preparation of Quality Assurance Project Plans," USEPA Office of Toxic Substances, 1984.

III. Nonmandatory Transmission Electron Microscopy Method

A. Definitions of Terms

1. "Analytical sensitivity"—Airborne asbestos concentration represented by each fiber counted under the electron microscope. It is determined by the air volume collected and the proportion of the filter examined. This method requires that the analytical sensitivity be no greater than 0.005 s/cm^3.

2. "Asbestiform"—A specific type of mineral fibrosity in which the fibers and fibrils possess high tensile strength and flexibility.

3. "Aspect ratio"—A ratio of the length to the width of a particle. Minimum aspect ratio as defined by this method is equal to or greater than 5:1.

4. "Bundle"—A structure composed of three or more fibers in a parallel arrangement with each fiber closer than one fiber diameter.

5. "Clean area"—A controlled environment which is maintained and monitored to assure a low probability of asbestos contamination to materials in that space. Clean areas used in this method have HEPA filtered air under positive pressure and are capable of sustained operation with an open laboratory blank which on subsequent analysis has an average of less than 18 structures/mm^2 in an area of 0.057 mm^2 (nominally 10 200 mesh grid openings) and a max-

imum of 53 structures/mm² for no more than one single preparation for that same area.

6. "Cluster"—A structure with fibers in a random arrangement such that all fibers are intermixed and no single fiber is isolated from the group. Groupings must have more than two intersections.

7. "ED"—Electron diffraction.

8. "EDXA"—Energy dispersive X-ray analysis.

9. "Fiber"—A structure greater than or equal to 0.5 μm in length with an aspect ratio (length to width) of 5:1 or greater and having substantially parallel sides.

10. "Grid"—An open structure for mounting on the sample to aid in its examination in the TEM. The term is used here to denote a 200-mesh copper lattice approximately 3 mm in diameter.

11. "Intersection"—Nonparallel touching or crossing of fibers, with the projection having an aspect ratio of 5:1 or greater.

12. "Laboratory sample coordinator"—That person responsible for the conduct of sample handling and the certification of the testing procedures.

13. "Filter background level"—The concentration of structures per square millimeter of filter that is considered indistinguishable from the concentration measured on blanks (filters through which no air has been drawn). For this method the filter background level is defined as 70 structures/mm².

14. "Matrix"—Fiber or fibers with one end free and the other end embedded in or hidden by a particulate. The exposed fiber must meet the fiber definition.

15. "NSD"—No structure detected.

16. "Operator"—A person responsible for the TEM instrumental analysis of the sample.

17. "PCM"—Phase contrast microscopy.

18. "SAED"—Selected area electron diffraction.

19. "SEM"—Scanning electron microscope.

20. "STEM"—Scanning transmission electron microscope.

21. "Structure"—a microscopic bundle, cluster, fiber, or matrix which may contain asbestos.

22. "S/cm³"—Structures per cubic centimeter.

23. "S/mm²"—Structures per square millimeter.

24. "TEM"—Transmission electron microscope.

B. Sampling

1. Sampling operations must be performed by qualified individuals completely independent of the abatement contractor to avoid possible conflict of interest (See References 1, 2, and 5 of Unit III.L.) Special precautions should be taken to avoid contamination of the sample. For example, materials that have not been prescreened for their asbestos background content should not be used; also, sample handling procedures which do not take cross contamination possibilities into account should not be used.

2. Material and supply checks for asbestos contamination should be made on all critical supplies, reagents, and procedures before their use in a monitoring study.

3. Quality control and quality assurance steps are needed to identify problem areas and isolate the cause of the contamination (see Reference 5 of Unit III.L.). Control checks shall be permanently recorded to document the quality of the information produced. The sampling firm must have written quality control procedures and documents which verify compliance. Independent audits by a qualified consultant or firm should be performed once a year. All documentation of compliance should be retained indefinitely to provide a guarantee of quality. A summary of Sample Data Quality Objectives is shown in Table II of Unit II.B.

4. Sampling materials.

a. Sample for airborne asbestos following an abatement action using commercially available cassettes.

b. Use either a cowling or a filter-retaining middle piece. Conductive material may reduce the potential for particulates to adhere to the walls of the cowl.

c. Cassettes must be verified as "clean" prior to use in the field. If packaged filters are used for loading or preloaded cassettes are purchased from the manufacturer or a distributor, the manufacturer's name and lot number should be entered on all field data sheets provided to the laboratory, and are required to be listed on all reports from the laboratory.

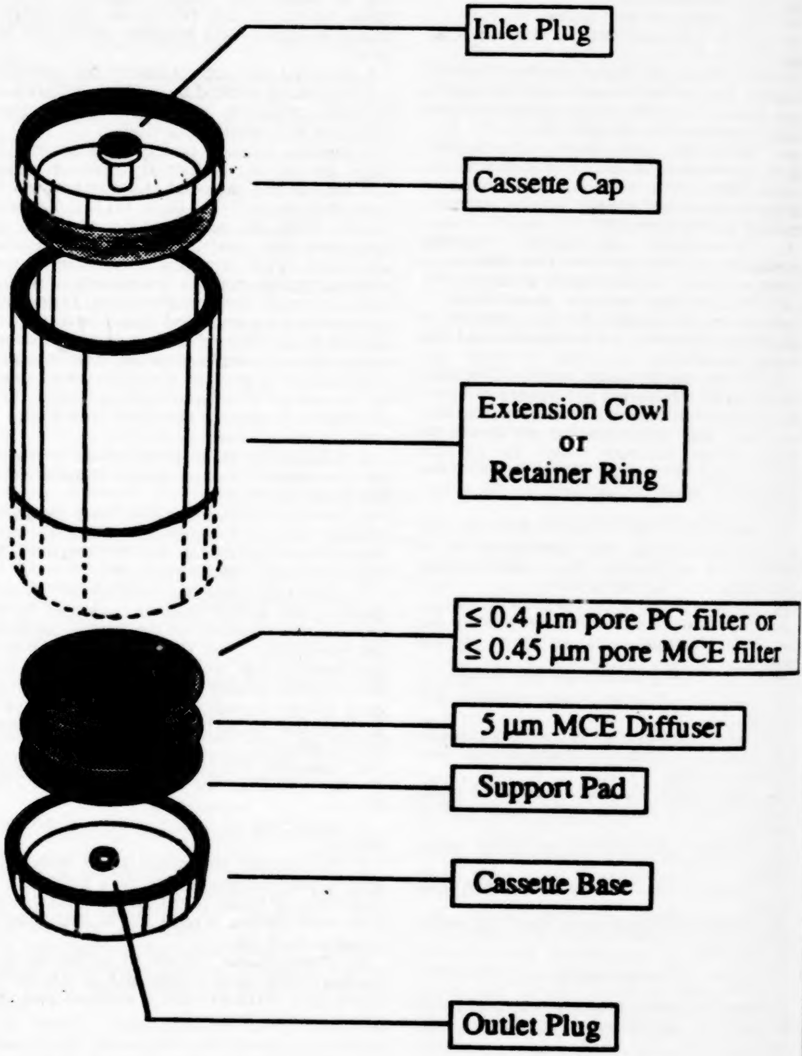
d. Assemble the cassettes in a clean facility (See definition of clean area under Unit III.A.).

e. Reloading of used cassettes is not permitted.

f. Use sample collection filters which are either polycarbonate having a pore size of less than or equal to 0.4 μm or mixed cellulose ester having a pore size of less than or equal to 0.45 μm.

g. Place these filters in series with a backup filter with a pore size of 5.0 μm (to serve as a diffuser) and a support pad. See the following Figure 1:

FIGURE I--SAMPLING CASSETTE CONFIGURATION


Inlet Plug
Cassette Cap
Extension Cowl
or
Retainer Ring
≤ 0.4 µm pore PC filter or
≤ 0.45 µm pore MCE filter
5 µm MCE Diffuser
Support Pad
Cassette Base
Outlet Plug

h. When polycarbonate filters are used, position the highly reflective face such that the incoming particulate is received on this surface.

i. Seal the cassettes to prevent leakage around the filter edges or between cassette part joints. A mechanical press may be useful to achieve a reproducible leak-free seal. Shrink fit gel-bands may be used for this purpose and are available from filter manufacturers and their authorized distributors.

j. Use wrinkle-free loaded cassettes in the sampling operation.

5. Pump setup.

a. Calibrate the sampling pump over the range of flow rates and loads anticipated for the monitoring period with this flow measuring device in series. Perform this calibration using guidance from EPA Method 2A each time the unit is sent to the field (See Reference 6 of Unit III.L.).

b. Configure the sampling system to preclude pump vibrations from being transmitted to the cassette by using a sampling stand separate from the pump station and making connections with flexible tubing.

c. Maintain continuous smooth flow conditions by damping out any pump action fluctuations if necessary.

d. Check the sampling system for leaks with the end cap still in place and the pump operating before initiating sample collection. Trace and stop the source of any flow indicated by the flowmeter under these conditions.

e. Select an appropriate flow rate equal to or greater than 1 L/min or less than 10 L/min for 25 mm cassettes. Larger filters may be operated at proportionally higher flow rates.

f. Orient the cassette downward at approximately 45 degrees from the horizontal.

g. Maintain a log of all pertinent sampling information, such as pump identification number, calibration data, sample location, date, sample identification number, flow rates at the beginning, middle, and end, start and stop times, and other useful information or comments. Use of a sampling log form is recommended. See the following Figure 2:

FIGURE 2--SAMPLING LOG FORM

Sample Number	Location of Sample	Pump I.D.	Start Time	Middle Time	End Time	Flow Rate

Inspector: ______________________________ Date: ____________________

h. Initiate a chain of custody procedure at the start of each sampling, if this is requested by the client.

i. Maintain a close check of all aspects of the sampling operation on a regular basis.

j. Continue sampling until at least the minimum volume is collected, as specified in the following Table I:

TABLE 1--NUMBER OF 200 MESH EM GRID OPENINGS (0.0057 MM^2) THAT NEED TO BE ANALYZED TO MAINTAIN SENSITIVITY OF 0.005 STRUCTURES/CC BASED ON VOLUME AND EFFECTIVE FILTER AREA

Effective Filter Area
385 sq mm

Volume (liters)	# of grid openings
560	*24*
600	23
700	19
800	17
900	15
1,000	14
1,100	12
1,200	**11**
1,300	**10**
1,400	**10**
1,500	**9**
1,600	**8**
1,700	**8**
1,800	**8**
1,900	7
2,000	7
2,100	6
2,200	6
2,300	6
2,400	6
2,500	5
2,600	5
2,700	5
2,800	5
2,900	5
3,000	5
3,100	4
3,200	4
3,300	4
3,400	4
3,500	4
3,600	4
3,700	4
3,800	4

Recommended Volume Range

Effective Filter Area
855 sq mm

Volume (liters)	# of grid openings
1,250	*24*
1,300	23
1,400	21
1,600	19
1,800	17
2,000	15
2,200	14
2,400	13
2,600	12
2,800	**11**
3,000	**10**
3,200	**9**
3,400	**9**
3,600	**8**
3,800	**8**
4,000	**8**
4,200	7
4,400	7
4,600	7
4,800	6
5,000	6
5,200	6
5,400	6
5,600	5
5,800	5
6,000	5
6,200	5
6,400	5
6,600	5
6,800	4
7,000	4
7,200	4
7,400	4
7,600	4

Recommended Volume Range

Note minimum volumes required:
25 mm : 560 liters
37 mm : 1250 liters

Filter diameter of 25 mm = effective area of 385 sq mm
Filter diameter of 37 mm = effective area of 855 sq mm

k. At the conclusion of sampling, turn the cassette upward before stopping the flow to minimize possible particle loss. If the sampling is resumed, restart the flow before reorienting the cassette downward. Note the condition of the filter at the conclusion of sampling.

l. Double check to see that all information has been recorded on the data collection forms and that the cassette is securely closed and appropriately identified using a waterproof label. Protect cassettes in individual clean resealed polyethylene bags. Bags are to be used for storing cassette caps when they are removed for sampling purposes. Caps and plugs should only be removed or replaced using clean hands or clean disposable plastic gloves.

m. Do not change containers if portions of these filters are taken for other purposes.

6. Minimum sample number per site. A minimum of 13 samples are to be collected for each testing consisting of the following:

a. A minimum of five samples per abatement area.

b. A minimum of five samples per ambient area positioned at locations representative of the air entering the abatement site.

c. Two field blanks are to be taken by removing the cap for not more than 30 sec and replacing it at the time of sampling before sampling is initiated at the following places:

i. Near the entrance to each ambient area.

ii. At one of the ambient sites.

(NOTE: Do not leave the blank open during the sampling period.)

d. A sealed blank is to be carried with each sample set. This representative cassette is not to be opened in the field.

7. Abatement area sampling.

a. Conduct final clearance sampling only after the primary containment barriers have been removed; the abatement area has been thoroughly dried; and, it has passed visual inspection tests by qualified personnel. (See Reference 1 of Unit III.L.)

b. Containment barriers over windows, doors, and air passageways must remain in place until the TEM clearance sampling and analysis is completed and results meet clearance test criteria. The final plastic barrier remains in place for the sampling period.

c. Select sampling sites in the abatement area on a random basis to provide unbiased and representative samples.

d. After the area has passed a thorough visual inspection, use aggressive sampling conditions to dislodge any remaining dust.

i. Equipment used in aggressive sampling such as a leaf blower and/or fan should be properly cleaned and decontaminated before use.

ii. Air filtration units shall remain on during the air monitoring period.

iii. Prior to air monitoring, floors, ceiling and walls shall be swept with the exhaust of a minimum one (1) horsepower leaf blower.

iv. Stationary fans are placed in locations which will not interfere with air monitoring equipment. Fan air is directed toward the ceiling. One fan shall be used for each 10,000 ft ^{3} of worksite.

v. Monitoring of an abatement work area with high-volume pumps and the use of circulating fans will require electrical power. Electrical outlets in the abatement area may be used if available. If no such outlets are available, the equipment must be supplied with electricity by the use of extension cords and strip plug units. All electrical power supply equipment of this type must be approved Underwriter Laboratory equipment that has not been modified. All wiring must be grounded. Ground fault interrupters should be used. Extreme care must be taken to clean up any residual water and ensure that electrical equipment does not become wet while operational.

vi. Low volume pumps may be carefully wrapped in 6-mil polyethylene to insulate the pump from the air. High volume pumps cannot be sealed in this manner since the heat of the motor may melt the plastic. The pump exhausts should be kept free.

vii. If recleaning is necessary, removal of this equipment from the work area must be handled with care. It is not possible to completely decontaminate the pump motor and parts since these areas cannot be wetted. To minimize any problems in this area, all equipment such as fans and pumps should be carefully wet wiped prior to removal from the abatement area. Wrapping and sealing low volume pumps in 6-mil polyethylene will provide easier decontamination of this equipment. Use of clean water and disposable wipes should be available for this purpose.

e. Pump flow rate equal to or greater than 1 L/min or less than 10 L/min may be used for 25 mm cassettes. The larger cassette diameters may have comparably increased flow.

f. Sample a volume of air sufficient to ensure the minimum quantitation limits. (See Table I of Unit III.B.5.j.)

8. Ambient sampling.

a. Position ambient samplers at locations representative of the air entering the abatement site. If makeup air entering the abatement site is drawn from another area of the building which is outside of the abatement area, place the pumps in the building, pumps should be placed out of doors located near the building and away from any obstructions that may influence wind patterns. If construction is in progress immediately outside the enclosure, it may be necessary to select another ambient site. Samples should be representative of any air entering the work site.

b. Locate the ambient samplers at least 3 ft apart and protect them from adverse weather conditions.

c. Sample same volume of air as samples taken inside the abatement site.

C. Sample Shipment

1. Ship bulk samples in a separate container from air samples. Bulk samples and air samples delivered to the analytical laboratory in the same container shall be rejected.

2. Select a rigid shipping container and pack the cassettes upright in a noncontaminating nonfibrous medium such as a bubble pack. The use of resealable polyethylene bags may help to prevent jostling of individual cassettes.

3. Avoid using expanded polystyrene because of its static charge potential. Also avoid using particle-based packaging materials because of possible contamination.

4. Include a shipping bill and a detailed listing of samples shipped, their descriptions and all identifying numbers or marks, sampling data, shipper's name, and contact information. For each sample set, designate which are the ambient samples, which are the abatement area samples, which are the field blanks, and which is the sealed blank if sequential analysis is to be performed.

5. Hand-carry samples to the laboratory in an upright position if possible; otherwise choose that mode of transportation least likely to jar the samples in transit.

6. Address the package to the laboratory sample coordinator by name when known and alert him or her of the package description, shipment mode, and anticipated arrival as part of the chain of custody and sample tracking procedures. This will also help the laboratory schedule timely analysis for the samples when they are received.

D. Quality Control/Quality Assurance Procedures (Data Quality Indicators)

Monitoring the environment for airborne asbestos requires the use of sensitive sampling and analysis procedures. Because the test is sensitive, it may be influenced by a variety of factors. These include the supplies used in the sampling operation, the performance of the sampling, the preparation of the grid from the filter and the actual examination of this grid in the microscope. Each of these unit operations must produce a product of defined quality if the analytical result is to be a reliable and meaningful test result. Accordingly, a series of control checks and reference standards is performed along with the sample analysis as indicators that the materials used are adequate and the operations are within acceptable limits. In this way, the quality of the data is defined, and the results are of known value. These checks and tests also provide timely and specific warning of any problems which might develop within the sampling and analysis operations. A description of these quality control/quality assurance procedures is summarized in the text below.

1. Prescreen the loaded cassette collection filters to assure that they do not contain concentrations of asbestos which may interfere with the analysis of the sample. A filter blank average of less than 18 s/mm^2 in an area of 0.057 mm^2 (nominally 10 200-mesh grid openings) and a maximum of 53 s/mm^2 for that same area for any single preparation is acceptable for this method.

2. Calibrate sampling pumps and their flow indicators over the range of their intended use with a recognized standard. Assemble the sampling system with a representative filter—not the filter which will be used in sampling—before and after the sampling operation.

3. Record all calibration information with the data to be used on a standard sampling form.

4. Ensure that the samples are stored in a secure and representative location.

5. Ensure that mechanical calibrations from the pump will be minimized to prevent transferral of vibration to the cassette.

6. Ensure that a continuous smooth flow of negative pressure is delivered by the pump by installing a damping chamber if necessary.

7. Open a loaded cassette momentarily at one of the indoor sampling sites when sampling is initiated. This sample will serve as an indoor field blank.

8. Open a loaded cassette momentarily at one of the outdoor sampling sites when sampling is initiated. This sample will serve as an outdoor field blank.

9. Carry a sealed blank into the field with each sample series. Do not open this cassette in the field.

10. Perform a leak check of the sampling system at each indoor and outdoor sampling site by activating the pump with the closed sampling cassette in line. Any flow indicates a leak which must be eliminated before initiating the sampling operation.

11. Ensure that the sampler is turned upright before interrupting the pump flow.

12. Check that all samples are clearly labeled and that all pertinent information has been enclosed before transfer of the samples to the laboratory.

E. Sample Receiving

1. Designate one individual as sample coordinator at the laboratory. While that individual will normally be available to receive samples, the coordinator may train and supervise others in receiving procedures for those times when he/she is not available.

2. Adhere to the following procedures to ensure both the continued chain-of-custody and the accountability of all samples passing through the laboratory:

a. Note the condition of the shipping package and data written on it upon receipt.

b. Retain all bills of lading or shipping slips to document the shipper and delivery time.

c. Examine the chain-of-custody seal, if any, and the package for its integrity.

d. If there has been a break in the seal or substantive damage to the package, the sample coordinator shall immediately notify the shipper and a responsible laboratory manager before any action is taken to unpack the shipment.

e. Packages with significant damage shall be accepted only by the responsible laboratory manager after discussions with the client.

3. Unwrap the shipment in a clean, uncluttered facility. The sample coordinator or his or her designee will record the contents, including a description of each item and all identifying numbers or marks. A Sample Receiving Form to document this information is attached for use when necessary. (See the following Figure 3.)

FIGURE 3--SAMPLE RECEIVING FORM

Date of package delivery ______ Package shipped from ______

Carrier ______ Shipping bill retained ______

*Condition of package on receipt ______

*Condition of custody seal ______

Number of samples received ______ Shipping manifest attached ______

Purchase Order No. ______ Project I.D. ______

Comments ______

No.	Description	Sampling Medium		Sampled Volume Liters	Receiving ID #	Assigned #
		PC	MCE			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

(Use as many additional sheets as needed.)

Comments ______

Date of acceptance into sample bank ______

Signature of chain-of-custody recipient ______

Disposition of samples ______

*Note: If the package has sustained substantial damage or the custody seal is broken, stop and contact the project manager and the shipper.

NOTE: The person breaking the chain-of-custody seal and itemizing the contents assumes responsibility for the shipment and signs documents accordingly.

4. Assign a laboratory number and schedule an analysis sequence.

5. Manage all chain-of-custody samples within the laboratory such that their integrity can be ensured and documented.

F. Sample Preparation

1. Personnel not affiliated with the Abatement Contractor shall be used to prepare samples and conduct TEM analysis. Wet-wipe the exterior of the cassettes to minimize contamination possibilities before taking them to the clean sample preparation facility.

2. Perform sample preparation in a well-equipped clean facility.

NOTE: The clean area is required to have the following minimum characteristics. The area or hood must be capable of maintaining a positive pressure with make-up air being HEPA filtered. The cumulative analytical blank concentration must average less than 18 s/mm^2 in an area of 0.057 s/mm^2 (nominally 10 200-mesh grid openings) with no more than one single preparation to exceed 53 s/mm^2 for that same area.

3. Preparation areas for air samples must be separated from preparation areas for bulk samples. Personnel must not prepare air samples if they have previously been preparing bulk samples without performing appropriate personal hygiene procedures, i.e., clothing change, showering, etc.

4. *Preparation.* Direct preparation techniques are required. The objective is to produce an intact carbon film containing the particulates from the filter surface which is sufficiently clear for TEM analysis. Currently recommended direct preparation procedures for polycarbonate (PC) and mixed cellulose ester (MCE) filters are described in Unit III.F.7. and 8. Sample preparation is a subject requiring additional research. Variation on those steps which do not substantively change the procedure, which improve filter clearing or which reduce contamination problems in a laboratory are permitted.

a. Use only TEM grids that have had grid opening areas measured according to directions in Unit III.J.

b. Remove the inlet and outlet plugs prior to opening the cassette to minimize any pressure differential that may be present.

c. Examples of techniques used to prepare polycarbonate filters are described in Unit III.F.7.

d. Examples of techniques used to prepare mixed cellulose ester filters are described in Unit III.F.8.

e. Prepare multiple grids for each sample.

f. Store the three grids to be measured in appropriately labeled grid holders or polyethylene capsules.

5. Equipment.

a. Clean area.

b. Tweezers. Fine-point tweezers for handling of filters and TEM grids.

c. Scalpel Holder and Curved No. 10 Surgical Blades.

d. Microscope slides.

e. Double-coated adhesive tape.

f. Gummed page reinforcements.

g. Micro-pipet with disposal tips 10 to 100 μL variable volume.

h. Vacuum coating unit with facilities for evaporation of carbon. Use of a liquid nitrogen cold trap above the diffusion pump will minimize the possibility of contamination of the filter surface by oil from the pumping system. The vacuum-coating unit can also be used for deposition of a thin film of gold.

i. *Carbon rod electrodes.* Spectrochemically pure carbon rods are required for use in the vacuum evaporator for carbon coating of filters.

j. *Carbon rod sharpener.* This is used to sharpen carbon rods to a neck. The use of necked carbon rods (or equivalent) allows the carbon to be applied to the filters with a minimum of heating.

k. *Low-temperature plasma asher.* This is used to etch the surface of collapsed mixed cellulose ester (MCE) filters. The asher should be supplied with oxygen, and should be modified as necessary to provide a throttle or bleed valve to control the speed of the vacuum to minimize disturbance of the filter. Some early models of ashers admit air too rapidly, which may disturb particulates on the surface of the filter during the etching step.

l. *Glass petri dishes, 10 cm in diameter, 1 cm high.* For prevention of excessive evaporation of solvent when these are in use, a good seal must be provided between the base and the lid. The seal can be improved by grinding the base and lid together with an abrasive grinding material.

m. Stainless steel mesh.

n. Lens tissue.

o. Copper 200-mesh TEM grids, 3 mm in diameter, or equivalent.

p. Gold 200-mesh TEM grids, 3 mm in diameter, or equivalent.

q. Condensation washer.

r. Carbon-coated, 200-mesh TEM grids, or equivalent.

s. Analytical balance, 0.1 mg sensitivity.

t. Filter paper, 9 cm in diameter.

u. Oven or slide warmer. Must be capable of maintaining a temperature of 65-70 °C.

v. Polyurethane foam, 6 mm thickness.

w. Gold wire for evaporation.

6. Reagents.

a. *General.* A supply of ultra-clean, fiber-free water must be available for washing of all components used in the analysis. Water that has been distilled in glass or filtered or deionized water is satisfactory for this purpose. Reagents must be fiber-free.

b. Polycarbonate preparation method—chloroform.

c. Mixed Cellulose Ester (MCE) preparation method—acetone or the Burdette procedure (Ref. 7 of Unit III.L.).

7. TEM specimen preparation from polycarbonate filters.

a. *Specimen preparation laboratory.* It is most important to ensure that contamination of TEM specimens by extraneous asbestos fibers is minimized during preparation.

b. Cleaning of sample cassettes. Upon receipt at the analytical laboratory and before they are taken into the clean facility or laminar flow hood, the sample cassettes must be cleaned of any contamination adhering to the outside surfaces.

c. Preparation of the carbon evaporator. If the polycarbonate filter has already been carbon-coated prior to receipt, the carbon coating step will be omitted, unless the analyst believes the carbon film is too thin. If there is a need to apply more carbon, the filter will be treated in the same way as an uncoated filter. Carbon coating must be performed with a high-vacuum coating unit. Units that are based on evaporation of carbon filaments in a vacuum generated only by an oil rotary pump have not been evaluated for this application, and must not be used. The carbon rods should be sharpened by a carbon rod sharpener to necks of about 4 mm long and 1 mm in diameter. The rods are installed in the evaporator in such a manner that the points are approximately 10 to 12 cm from the surface of a microscope slide held in the rotating and tilting device.

d. Selection of filter area for carbon coating. Before preparation of the filters, a 75 mm x 50 mm microscope slide is washed and dried. This slide is used to support strips of filter during the carbon evaporation. Two parallel strips of double-sided adhesive tape are applied along the length of the slide. Polycarbonate filters are easily stretched during handling, and cutting of areas for further preparation must be performed with great care. The filter and the MCE backing filter are removed together from the cassette and placed on a cleaned glass microscope slide. The filter can be cut with a curved scalpel blade by rocking the blade from the point placed in contact with the filter. The process can be repeated to cut a strip approximately 3 mm wide across the diameter of the filter. The strip of polycarbonate filter is separated from the corresponding strip of backing filter and carefully placed so that it bridges the gap between the adhesive tape strips on the microscope slide. The filter strip can be held with fine-point tweezers and supported underneath by the scalpel blade during placement on the microscope slide. The analyst can place several such strips on the same microscope slide, taking care to rinse and wet-wipe the scalpel blade and tweezers before handling a new sample. The filter strips should be identified by etching the glass slide or marking the slide using a marker insoluble in water and solvents. After the filter strip has been cut from each filter, the residual parts of the filter must be returned to the cassette and held in position by reassembly of the cassette. The cassette will then be archived for a period of 30 days or returned to the client upon request.

e. Carbon coating of filter strips. The glass slide holding the filter strips is placed on the rotation-tilting device, and the evaporator chamber is evacuated. The evaporation must be performed in very short bursts, separated by some seconds to allow the electrodes to cool. If evaporation is too rapid the strips of polycarbonate filter will begin to curl, which will lead to cross-linking of the surface material and make it relatively insoluble in chloroform. An experienced analyst can judge the thickness of carbon film to be applied, and some test should be made first on unused filters. If the film is too thin, large particles will be lost from the TEM specimen, and there will be few complete and undamaged grid openings on the specimen. If the coating is too thick, the filter will tend to curl when exposed to chloroform vapor and the carbon film may not adhere to the support mesh. Too thick a carbon film will also lead to a TEM image that is lacking in contrast, and the ability to obtain ED patterns will be compromised. The carbon film should be as thin as possible and remain intact on most of the grid openings of the TEM specimen intact.

f. Preparation of the Jaffe washer. The precise design of the Jaffe washer is not considered important, so any one of the published designs may be used. A washer consisting of a simple stainless steel bridge is recommended. Several pieces of lens tissue approximately 1.0 cm x 0.5 cm are placed on the stainless steel bridge, and the washer is filled with chloroform to a level where the meniscus contacts the underside of the mesh, which results in saturation of the lens tissue. See References 8 and 10 of Unit III.L.

g. Placing of specimens into the Jaffe washer. The TEM grids are first placed on a piece of lens tissue so that individual grids can be picked up with tweezers. Using a curved scalpel blade, the analyst excises three 3 mm square pieces of the carbon-coated polycarbonate filter from the filter strip. The three squares are selected from the center of the strip and from two points between the outer periphery of the active surface and the center. The piece of filter is placed on a TEM specimen grid with the shiny side of the TEM grid facing upwards, and the whole assembly is placed boldly onto the saturated lens tissue in the Jaffe washer. If carbon-coated grids are used, the filter should be placed carbon-coated side down. The three excised squares of filters are placed on the same piece of lens tissue. Any number of separate pieces of lens tissue may be placed in the same Jaffe washer. The lid is then placed on the Jaffe washer, and the system is allowed to stand for several hours, preferably overnight.

h. *Condensation washing.* It has been found that many polycarbonate filters will not dissolve completely in the Jaffe washer, even after being exposed to chloroform for as long as 3 days. This problem becomes more serious if the surface of the filter was overheated during the carbon evaporation. The presence of undissolved filter medium on the TEM preparation leads to partial or complete obscuration of areas of the sample, and fibers that may be present in these areas of the specimen will be overlooked; this will lead to a low result. Undissolved filter medium also compromises the ability to obtain ED patterns. Before they are counted, TEM grids must be examined critically to determine whether they are adequately cleared of residual filter medium. It has been found that condensation washing of the grids after the initial Jaffe washer treatment, with chloroform as the solvent, clears all residual filter medium in a period of approximately 1 hour. In practice, the piece of lens tissue supporting the specimen grids is transferred to the cold finger of the condensation washer, and the washer is operated for about 1 hour. If the specimens are cleared satisfactorily by the Jaffe washer alone, the condensation washer step may be unnecessary.

8. TEM specimen preparation from MCE filters.

a. This method of preparing TEM specimens from MCE filters is similar to that specified in NIOSH Method 7402. See References 7, 8, and 9 of Unit III.L.

b. Upon receipt at the analytical laboratory, the sample cassettes must be cleaned of any contamination adhering to the outside surfaces before entering the clean sample preparation area.

c. Remove a section from any quadrant of the sample and blank filters.

d. Place the section on a clean microscope slide. Affix the filter section to the slide with a gummed paged reinforcement or other suitable means. Label the slide with a water and solvent-proof marking pen.

e. Place the slide in a petri dish which contains several paper filters soaked with 2 to 3 mL acetone. Cover the dish. Wait 2 to 4 minutes for the sample filter to fuse and clear.

f. Plasma etching of the collapsed filter is required.

i. The microscope slide to which the collapsed filter pieces are attached is placed in a plasma asher. Because plasma ashers vary greatly in their performance, both from unit to unit and between different positions in the asher chamber, it is difficult to specify the conditions that should be used. This is one area of the method that requires further evaluation. Insufficient etching will result in a failure to expose embedded filters, and too much etching may result in loss of particulate from the surface. As an interim measure, it is recommended that the time for ashing of a known weight of a collapsed filter be established and that the etching rate be calculated in terms of micrometers per second. The actual etching time used for a particular asher and operating conditions will then be set such that a 1-2 μm (10 percent) layer of collapsed surface will be removed.

ii. Place the slide containing the collapsed filters into a low-temperature plasma asher, and etch the filter.

g. Transfer the slide to a rotating stage inside the bell jar of a vacuum evaporator. Evaporate a 1 mm x 5 mm section of graphite rod onto the cleared filter. Remove the slide to a clean, dry, covered petri dish.

h. Prepare a second petri dish as a Jaffe washer with the wicking substrate prepared from filter or lens paper placed on top of a 6 mm thick disk of clean spongy polyurethane foam. Cut a V-notch on the edge of the foam and filter paper. Use the V-notch as a reservoir for adding solvent. The wicking substrate should be thin enough to fit into the petri dish without touching the lid.

i. Place carbon-coated TEM grids face up on the filter or lens paper. Label the grids by marking with a pencil on the filter paper or by putting registration marks on the petri dish lid and marking with a waterproof marker on the dish lid. In a fume hood, fill the dish with acetone until the wicking substrate is saturated. The level of acetone should be just high enough to saturate the filter paper without creating puddles.

j. Remove about a quarter section of the carbon-coated filter samples from the glass slides using a surgical knife and tweezers. Carefully place the section of the filter, carbon side down, on the appropriately labeled grid in the acetone-saturated petri dish. When all filter sections have been transferred, slowly add more solvent to the wedge-shaped trough to bring the acetone level up to the highest possible level without disturbing the sample preparations. Cover the petri dish. Elevate one side of the petri dish by placing a slide under it. This allows drops of condensed solvent vapors to form near the edge rather than in the center where they would drip onto the grid preparation.

G. TEM Method

1. *Instrumentation.*

a. Use an 80-120 kV TEM capable of performing electron diffraction with a fluorescent screen inscribed with calibrated gradations. If the TEM is equipped with EDXA it must either have a STEM attachment or be capable of producing a spot less than 250 nm in diameter at crossover. The microscope shall be calibrated routinely (see Unit III.J.) for magnification and camera constant.

b. While not required on every microscope in the laboratory, the laboratory must have either one microscope equipped with energy dispersive X-ray analysis or access to an equivalent system on a TEM in another laboratory. This must be an Energy Dispersive X-ray Detector mounted on TEM column and associated hardware/software to collect, save, and read out spectral information. Calibration of Multi-Channel Analyzer shall be checked regularly for Al at 1.48 KeV and Cu at 8.04 KeV, as well as the manufacturer's procedures.

i. Standard replica grating may be used to determine magnification (e.g., 2160 lines/mm).

ii. Gold standard may be used to determine camera constant.

c. Use a specimen holder with single tilt and/or double tilt capabilities.

2. Procedure.

a. Start a new Count Sheet for each sample to be analyzed. Record on count sheet: analyst's initials and date; lab sample number; client sample number microscope identification; magnification for analysis; number of predetermined grid openings to be analyzed; and grid identification. See the following Figure 4:

FIGURE 4--COUNT SHEET

Lab Sample No. ______
Client Sample No. ______
Instrument I.D. ______
Magnification ______
Acc. Voltage ______

Filter Type ______
Filter Area ______
Grid I.D. ______
Grid Opening (GO) Area ______
No. GO to be Analyzed ______

Operator ______
Date ______
Comments ______

GO	Structure No.	Structure Type*	Length		ED Observation				EDAX
			< 5µm	≥ 5 µm	Chrys.	Amph.	Nonasb.	Neg. ID	

GO	Structure No.	Structure Type*	Length		ED Observation				EDAX
			< 5µm	≥ 5 µm	Chrys.	Amph.	Nonasb.	Neg. ID	

*B = Bundle
C = Cluster
F = Fiber
M = Matrix

NFD = No fibers detected
N = No diffraction obtained

b. Check that the microscope is properly aligned and calibrated according to the manufacturer's specifications and instructions.

c. Microscope settings: 80-120 kV, grid assessment 250-1000X, then 15,000-20,000X screen magnification for analysis.

d. Approximately one-half (0.5) of the predetermined sample area to be analyzed shall be performed on one sample grid preparation and the remaining half on a second sample grid preparation.

e. Determine the suitability of the grid.

i. Individual grid openings with greater than 5 percent openings (holes) or covered with greater than 25 percent particulate matter or obviously having nonuniform loading shall not be analyzed.

ii. Examine the grid at low magnification (<1000X) to determine its suitability for detailed study at higher magnifications.

iii. Reject the grid if:

(1) Less than 50 percent of the grid openings covered by the replica are intact.

(2) It is doubled or folded.

(3) It is too dark because of incomplete dissolution of the filter.

iv. If the grid is rejected, load the next sample grid.

v. If the grid is acceptable, continue on to Step 6 if mapping is to be used; otherwise proceed to Step 7.

f. Grid Map (Optional).

i. Set the TEM to the low magnification mode.

ii. Use flat edge or finder grids for mapping.

iii. Index the grid openings (fields) to be counted by marking the acceptable fields for one-half (0.5) of the area needed for analysis on each of the two grids to be analyzed. These may be marked just before examining each grid opening (field), if desired.

iv. Draw in any details which will allow the grid to be properly oriented if it is reloaded into the microscope and a particular field is to be reliably identified.

g. Scan the grid.

i. Select a field to start the examination.

ii. Choose the appropriate magnification (15,000 to 20,000X screen magnification).

iii. Scan the grid as follows.

(1) At the selected magnification, make a series of parallel traverses across the field. On reaching the end of one traverse, move the image one window and reverse the traverse.

NOTE: A slight overlap should be used so as not to miss any part of the grid opening (field).

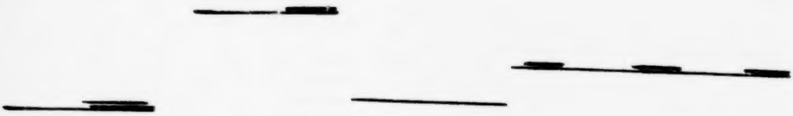
(2) Make parallel traverses until the entire grid opening (field) has been scanned.

h. Identify each structure for appearance and size.

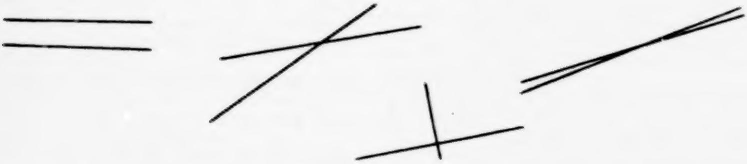
i. Appearance and size: Any continuous grouping of particles in which an asbestos fiber within aspect ratio greater than or equal to 5:1 and a length greater than or equal to 0.5 μm is detected shall be recorded on the count sheet. These will be designated asbestos structures and will be classified as fibers, bundles, clusters, or matrices. Record as individual fibers any contiguous grouping having 0, 1, or 2 definable intersections. Groupings having more than 2 intersections are to be described as cluster or matrix. See the following Figure 5:

FIGURE 5--COUNTING GUIDELINES USED IN DETERMINING ASBESTOS STRUCTURES

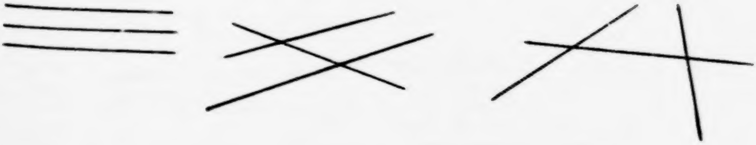
Count as 1 fiber; 1 Structure; no intersections.



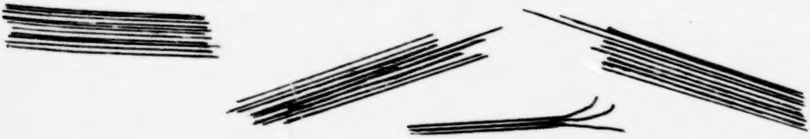
Count as 2 fibers if space between fibers is greater than width of 1 fiber diameter or number of intersections is equal to or less than 1.



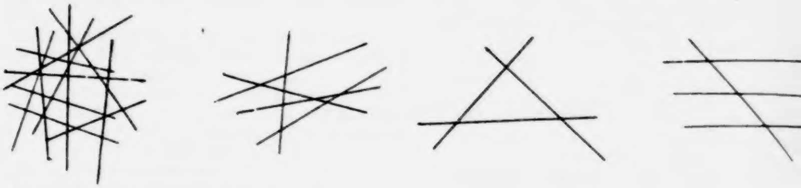
Count as 3 structures if space between fibers is greater than width of 1 fiber diameter or if the number of intersections is equal to or less than 2.



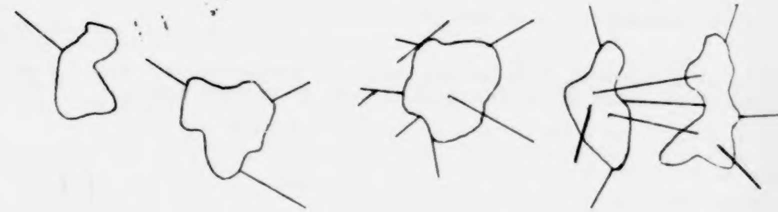
Count bundles as 1 structure; 3 or more parallel fibrils less than 1 fiber diameter separation.



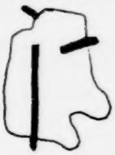
Count clusters as 1 structure; fibers having greater than or equal to 3 intersections.



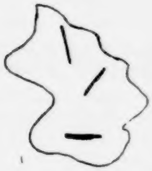
Count matrix as 1 structure.



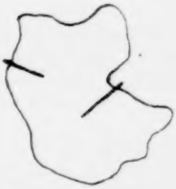
DO NOT COUNT AS STRUCTURES:



Fiber protrusion
<5:1 Aspect Ratio



No fiber protusion



Fiber protrusion
<0.5 micrometer

— <0.5 micrometer in length
▬ <5:1 Aspect Ratio

An intersection is a non-parallel touching or crossing of fibers, with the projection having an aspect ratio of 5:1 or greater. Combinations such as a matrix and cluster, matrix and bundle, or bundle and cluster are categorized by the dominant fiber quality—cluster, bundle, and matrix, respectively. Separate categories will be maintained for fibers less than 5 µm and for fibers greater than or equal to 5 µm in length. Not required, but useful, may be to record the fiber length in 1 µm intervals. (Identify each structure morphologically and analyze it as it enters the "window".)

(1) *Fiber.* A structure having a minimum length greater than 0.5 µm and an aspect ratio (length to width) of 5:1 or greater and substantially parallel sides. Note the appearance of the end of the fiber, i.e., whether it is flat, rounded or dovetailed, no intersections.

(2) *Bundle.* A structure composed of 3 or more fibers in a parallel arrangement with each fiber closer than one fiber diameter.

(3) *Cluster.* A structure with fibers in a random arrangement such that all fibers are intermixed and no single fiber is isolated from the group; groupings must have more than 2 intersections.

(4) *Matrix.* Fiber or fibers with one end free and the other end embedded in or hidden by a particulate. The exposed fiber must meet the fiber definition.

(5) *NSD.* Record NSD when no structures are detected in the field.

(6) *Intersection.* Non-parallel touching or crossing of fibers, with the projection having an aspect ratio 5:1 or greater.

ii. Structure Measurement.

(1) Recognize the structure that is to be sized.

(2) Memorize its location in the "window" relative to the sides, inscribed square and to other particulates in the field so this exact location can be found again when scanning is resumed.

(3) Measure the structure using the scale on the screen.

(4) Record the length category and structure type classification on the count sheet after the field number and fiber number.

(5) Return the fiber to its original location in the window and scan the rest of the field for other fibers; if the direction of travel is not remembered, return to the right side of the field and begin the traverse again.

i. Visual identification of Electron Diffraction (ED) patterns is required for each asbestos structure counted which would cause the analysis to exceed the 70 s/mm^2 concentration. (Generally this means the first four fibers identified as asbestos must exhibit an identifiable diffraction pattern for chrysotile or amphibole.)

i. Center the structure, focus, and obtain an ED pattern. (See Microscope Instruction Manual for more detailed instructions.)

ii. From a visual examination of the ED pattern, obtained with a short camera length, classify the observed structure as belonging to one of the following classifications: chrysotile, amphibole, or nonasbestos.

(1) Chrysotile: The chrysotile asbestos pattern has characteristic streaks on the layer lines other than the central line and some streaking also on the central line. There will be spots of normal sharpness on the central layer line and on alternate lines (2nd, 4th, etc.). The repeat distance between layer lines is 0.53 nm and the center doublet is at 0.73 nm. The pattern should display (002), (110), (130) diffraction maxima; distances and geometry should match a chrysotile pattern and be measured semiquantitatively.

(2) Amphibole Group [includes grunerite (amosite), crocidolite, anthophyllite, tremolite, and actinolite]: Amphibole asbestos fiber patterns show layer lines formed by very closely spaced dots, and the repeat distance between layer lines is also about 0.53 nm. Streaking in layer lines is occasionally present due to crystal structure defects.

(3) Nonasbestos: Incomplete or unobtainable ED patterns, a nonasbestos EDXA, or a nonasbestos morphology.

iii. The micrograph number of the recorded diffraction patterns must be reported to the client and maintained in the laboratory's quality assurance records. The records must also demonstrate that the identification of the pattern has been verified by a qualified individual and that the operator who made the identification is maintaining at least an 80 percent correct visual identification based on his measured patterns. In the event that examination of the pattern by the qualified individual indicates that the pattern had been misidentified visually, the client shall be contacted. If the pattern is a suspected chrysotile, take a photograph of the diffraction pattern at 0 degrees tilt. If the structure is suspected to be amphibole, the sample may have to be tilted to obtain a simple geometric array of spots.

j. Energy Dispersive X-Ray Analysis (EDXA).

i. Required of all amphiboles which would cause the analysis results to exceed the 70 s/mm^2 concentration. (Generally speaking, the first 4 amphiboles would require EDXA.)

ii. Can be used alone to confirm chrysotile after the 70 s/mm^2 concentration has been exceeded.

iii. Can be used alone to confirm all nonasbestos.

iv. Compare spectrum profiles with profiles obtained from asbestos standards. The closest match identifies and categorizes the structure.

v. If the EDXA is used for confirmation, record the properly labeled spectrum on a computer disk, or if a hard copy, file with analysis data.

vi. If the number of fibers in the nonasbestos class would cause the analysis to exceed the 70 s/mm² concentration, their identities must be confirmed by EDXA or measurement of a zone axis diffraction pattern to establish that the particles are nonasbestos.

k. Stopping Rules.

i. If more than 50 asbestiform structures are counted in a particular grid opening, the analysis may be terminated.

ii. After having counted 50 asbestiform structures in a minimum of 4 grid openings, the analysis may be terminated. The grid opening in which the 50th fiber was counted must be completed.

iii. For blank samples, the analysis is always continued until 10 grid openings have been analyzed.

iv. In all other samples the analysis shall be continued until an analytical sensitivity of 0.005 s/cm³ is reached.

l. Recording Rules. The count sheet should contain the following information:

i. Field (grid opening): List field number.

ii. Record "NSD" if no structures are detected.

iii. Structure information.

(1) If fibers, bundles, clusters, and/or matrices are found, list them in consecutive numerical order, starting over with each field.

(2) Length. Record length category of asbestos fibers examined. Indicate if less than 5 μm or greater than or equal to 5 μm.

(3) Structure Type. Positive identification of asbestos fibers is required by the method. At least one diffraction pattern of each fiber type from every five samples must be recorded and compared with a standard diffraction pattern. For each asbestos fiber reported, both a morphological descriptor and an identification descriptor shall be specified on the count sheet.

(4) Fibers classified as chrysotile must be identified by diffraction and/or X-ray analysis and recorded on the count sheet. X-ray analysis alone can be used as sole identification only after 70s/mm² have been exceeded for a particular sample.

(5) Fibers classified as amphiboles must be identified by X-ray analysis and electron diffraction and recorded on the count sheet. (X-ray analysis alone can be used as sole identification only after 70s/mm² have been exceeded for a particular sample.)

(6) If a diffraction pattern was recorded on film, the micrograph number must be indicated on the count sheet.

(7) If an electron diffraction was attempted and an appropriate spectra is not observed, N should be recorded on the count sheet.

(8) If an X-ray analysis is attempted but not observed, N should be recorded on the count sheet.

(9) If an X-ray analysis spectrum is store the file and disk number must be record on the count sheet.

m. Classification Rules.

i. *Fiber*. A structure having a minimu length greater than or equal to 0.5 μm a an aspect ratio (length to width) of 5:1 greater and substantially parallel side Note the appearance of the end of the fibe i.e., whether it is flat, rounded or dovetaile

ii. *Bundle*. A structure composed of thre or more fibers in a parallel arrangemen with each fiber closer than one fiber diame ter.

iii. *Cluster*. A structure with fibers in random arrangement such that all fiber are intermixed and no single fiber is isolate from the group. Groupings must have mor than two intersections.

iv. *Matrix*. Fiber or fibers with one en free and the other end embedded in o hidden by a particulate. The exposed fiber must meet the fiber definition.

v. *NSD*. Record NSD when no structures are detected in the field.

n. After all necessary analyses of a particle structure have been completed, return the goniometer stage to 0 degrees, and return the structure to its original location by recall of the original location.

o. Continue scanning until all the structures are identified, classified and sized i the field.

p. Select additional fields (grid openings at low magnification; scan at a chosen magnification (15,000 to 20,000X screen magnification); and analyze until the stopping rule becomes applicable.

q. Carefully record all data as they are being collected, and check for accuracy.

r. After finishing with a grid, remove it from the microscope, and replace it in the appropriate grid hold. Sample grids must be stored for a minimum of 1 year from the date of the analysis; the sample cassette must be retained for a minimum of 30 days by the laboratory or returned at the client's request.

H. Sample Analytical Sequence

1. Carry out visual inspection of work site prior to air monitoring.

2. Collect a minimum of five air samples inside the work site and five samples outside the work site. The indoor and outdoor samples shall be taken during the same time period.

3. Analyze the abatement area samples according to this protocol. The analysis must meet the 0.005 s/cm³ analytical sensitivity.

4. Remaining steps in the analytical sequence are contained in Unit IV. of this Appendix.

I. Reporting

The following information must be reported to the client. See the following Table II:

TABLE II--EXAMPLE LABORATORY LETTERHEAD

Laboratory I.D.	Client I.D.	FILTER MEDIA DATA				Analyzed Area, mm^2	Sample Volume, cc
		Type	Diameter, mm	Effective Area, mm^2	Pore Size, µm		

INDIVIDUAL ANALYTICAL RESULTS

Laboratory I.D.	Client I.D.	# Asbestos Structures	Analytical Sensitivity, s/cc	CONCENTRATION	
				Structures/mm^2	Structures/cc

The analysis was carried out to the approved TEM method. This laboratory is in compliance with the
specified by the method.

Authorized Signature

1. Concentration in structures per square millimeter and structures per cubic centimeter.
2. Analytical sensitivity used for the analysis.
3. Number of asbestos structures.
4. Area analyzed.
5. Volume of air samples (which was initially provided by client).
6. Average grid size opening.
7. Number of grids analyzed.
8. Copy of the count sheet must be included with the report.
9. Signature of laboratory official to indicate that the laboratory met specifications of the AHERA method.
10. Report form must contain official laboratory identification (e.g., letterhead).
11. Type of asbestos.

J. Calibration Methodology

NOTE: Appropriate implementation of the method requires a person knowledgeable in electron diffraction and mineral identification by ED and EDXA. Those inexperienced laboratories wishing to develop capabilities may acquire necessary knowledge through analysis of appropriate standards and by following detailed methods as described in References 8 and 10 of Unit III.L.

1. *Equipment Calibration.* In this method, calibration is required for the air-sampling equipment and the transmission electron microscope (TEM).

a. *TEM Magnification.* The magnification at the fluorescent screen of the TEM must be calibrated at the grid opening magnification (if used) and also at the magnification used for fiber counting. This is performed with a cross grating replica. A logbook must be maintained, and the dates of calibration depend on the past history of the particular microscope; no frequency is specified. After any maintenance of the microscope that involved adjustment of the power supplied to the lenses or the high-voltage system or the mechanical disassembly of the electron optical column apart from filament exchange, the magnification must be recalibrated. Before the TEM calibration is performed, the analyst must ensure that the cross grating replica is placed at the same distance from the objective lens as the specimens are. For instruments that incorporate an eucentric tilting specimen stage, all speciments and the cross grating replica must be placed at the eucentric position.

b. Determination of the TEM magnification on the fluorescent screen.

i. Define a field of view on the fluorescent screen either by markings or physical boundaries. The field of view must be measurable or previously inscribed with a scale or concentric circles (all scales should be metric).

ii. Insert a diffraction grating replica (for example a grating containing 2,160 lines/mm) into the specimen holder and place into the microscope. Orient the replica so that the grating lines fall perpendicular to the scale on the TEM fluorescent screen. Ensure that the goniometer stage tilt is 0 degrees.

iii. Adjust microscope magnification to 10,000X or 20,000X. Measure the distance (mm) between two widely separated lines on the grating replica. Note the number of spaces between the lines. Take care to measure between the same relative positions on the lines (e.g., between left edges of lines).

NOTE: The more spaces included in the measurement, the more accurate the final calculation. On most microscopes, however, the magnification is substantially constant only within the central 8–10 cm diameter region of the fluorescent screen.

iv. Calculate the true magnification (M) on the fluorescent screen:

$$M = XG/Y$$

where:

X = total distance (mm) between the designated grating lines;

G = calibration constant of the grating replica (lines/mm):

Y = number of grating replica spaces counted along X.

c. Calibration of the EDXA System. Initially, the EDXA system must be calibrated by using two reference elements to calibrate the energy scale of the instrument. When this has been completed in accordance with the manufacturer's instructions, calibration in terms of the different types of asbestos can proceed. The EDXA detectors vary in both solid angle of detection and in window thickness. Therefore, at a particular accelerating voltage in use on the TEM, the count rate obtained from specific dimensions of fiber will vary both in absolute X-ray count rate and in the relative X-ray peak heights for different elements. Only a few minerals are relevant for asbestos abatement work, and in this procedure the calibration is specified in terms of a "fingerprint" technique. The EDXA spectra must be recorded from individual fibers of the relevant minerals, and identifications are made on the basis of semiquantitative comparisons with these reference spectra.

d. Calibration of Grid Openings.

i. Measure 20 grid openings on each of 20 random 200-mesh copper grids by placing a grid on a glass slide and examining it under the PCM. Use a calibrated graticule to measure the average field diameter and use this number to calculate the field area for an average grid opening. Grids are to be randomly selected from batches up to 1,000.

NOTE: A grid opening is considered as one field.

ii. The mean grid opening area must be measured for the type of specimen grids in use. This can be accomplished on the TEM at a properly calibrated low magnification or on an optical microscope at a magnification of approximately 400X by using an eyepiece fitted with a scale that has been calibrated against a stage micrometer. Optical microscopy utilizing manual or automated procedures may be used providing instrument calibration can be verified.

e. Determination of Camera Constant and ED Pattern Analysis.

i. The camera length of the TEM in ED operating mode must be calibrated before ED patterns on unknown samples are observed. This can be achieved by using a carbon-coated grid on which a thin film of gold has been sputtered or evaporated. A thin film of gold is evaporated on the specimen TEM grid to obtain zone-axis ED patterns superimposed with a ring pattern from the polycrystalline gold film.

ii. In practice, it is desirable to optimize the thickness of the gold film so that only one or two sharp rings are obtained on the superimposed ED pattern. Thicker gold film would normally give multiple gold rings, but it will tend to mask weaker diffraction spots from the unknown fibrous particulates. Since the unknown d-spacings of most interest in asbestos analysis are those which lie closest to the transmitted beam, mulitiple gold rings are unnecessary on zone-axis E patterns. An average camera constant usin multiple gold rings can be determined. Th camera constant is one-half the diameter, D of the rings times the interplanar spacing d, of the ring being measured.

K. Quality Control/Quality Assurance Procedures (Data Quality Indicators)

Monitoring the environment for airborn asbestos requires the use of sensitive sampling and analysis procedures. Because th test is sensitive, it may be influenced by variety of factors. These include the supplies used in the sampling operation, the performance of the sampling, the preparation of the grid from the filter and the actual examination of this grid in the microscope. Each of these unit operations must produce a product of defined quality if the analytical result is to be a reliable and meaningful test result. Accordingly, a series of control checks and reference standards is performed along with the sample analysis as indicators that the materials used are adequate and the operations are within acceptable limits. In this way, the quality of the data is defined and the results are of known value. These checks and tests also provide timely and specific warning of any problems which might develop within the sampling and analysis operations. A description of these quality control/quality assurance procedures is summarized in the following Table III:

TABLE III--SUMMARY OF LABORATORY DATA QUALITY OBJECTIVES

Unit Operation	QC Check	Frequency	Conformance Expectation
Sample receiving	Review of receiving report	Each sample	95% complete
Sample custody	Review of chain-of-custody record	Each sample	95% complete
Sample preparation	Supplies and reagents	On receipt	Meet specs. or reject
	Grid opening size	20 openings/20 grids/lot of 1000 or 1 opening/sample	100%
	Special clean area monitoring	After cleaning or service	Meet specs or reclean
	Laboratory blank	1 per prep series or 10%	Meet specs or reanalyze series
	Plasma etch blank	1 per 20 samples	75%
	Multiple preps (3 per sample)	Each sample	One with cover of 15 complete grid sqs.
Sample analysis	System check	Each day	Each day
	Alignment check	Each day	Each day
	Magnification calibration with low and high standards	Each month or after service	95%
	ED calibration by gold standard	Weekly	95%
	EDS calibration by copper line	Daily	95%
Performance check	Laboratory blank (measure of cleanliness)	Prep 1 per series or 10% read 1 per 25 samples	Meet specs or reanalyze series
	Replicate counting (measure of precision)	1 per 100 samples	1.5 x Poisson Std. Dev.
	Duplicate analysis (measure of reproducibility)	1 per 100 samples	2 x Poisson Std. Dev.
	Known samples of typical materials (working standards)	Training and for comparison with unknowns	100%
	Analysis of NBS SRM 1876 and/or RM 8410 (measure of accuracy and comparability)	1 per analyst per year	1.5 x Poisson Std. Dev.
	Data entry review (data validation and measure of completeness)	Each sample	95%
	Record and verify ID electron diffraction pattern of structure	1 per 5 samples	80% accuracy
Calculations and data reduction	Hand calculation of automated data reduction procedure or independent recalculation of hand-calculated data	1 per 100 samples	85%

1. When the samples arrive at the laboratory, check the samples and documentation for completeness and requirements before initiating the analysis.

2. Check all laboratory reagents and supplies for acceptable asbestos background levels.

3. Conduct all sample preparation in a clean room environment monitored by laboratory blanks and special testing after cleaning or servicing the room.

4. Prepare multiple grids of each sample.

5. Provide laboratory blanks with each sample batch. Maintain a cumulative average of these results. If this average is greater than 53 f/mm ^{2} per 10 200-mesh grid openings, check the system for possible sources of contamination.

6. Check for recovery of asbestos from cellulose ester filters submitted to plasma asher.

7. Check for asbestos carryover in the plasma asher by including a blank alongside the positive control sample.

8. Perform a systems check on the transmission electron microscope daily.

9. Make periodic performance checks of magnification, electron diffraction and energy dispersive X-ray systems as set forth in Table III of Unit III.K.

10. Ensure qualified operator performance by evaluation of replicate counting, duplicate analysis, and standard sample comparisons as set forth in Table III of Unit III.K.

11. Validate all data entries.

12. Recalculate a percentage of all computations and automatic data reduction steps as specified in Table III.

13. Record an electron diffraction pattern of one asbestos structure from every five samples that contain asbestos. Verify the identification of the pattern by measurement or comparison of the pattern with patterns collected from standards under the same conditions.

The outline of quality control procedures presented above is viewed as the minimum required to assure that quality data is produced for clearance testing of an asbestos abated area. Additional information may be gained by other control tests. Specifics on those control procedures and options available for environmental testing can be obtained by consulting References 6, 7, and 11 of Unit III.L.

L. References

For additional background information on this method the following references should be consulted.

1. "Guidelines for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024, June 1985.

2. "Measuring Airborne Asbestos Following an Abatement Action," USEPA/ Office of Toxic Substances, EPA 600/4-85-049, 1985.

3. Small, John and E. Steel. Asbestos Standards: Materials and Analytical Methods. N.B.S. Special Publication 619, 1982.

4. Campbell, W.J , R.L. Blake, L.L. Brown, E.E. Cather, and J.J. Sjoberg. Selected Silicate Minerals and Their Asbestiform Varieties. Information Circular 8751, U.S. Bureau of Mines, 1977.

5. Quality Assurance Handbook for Air Pollution Measurement System. Ambient Air Methods, EPA 600/4-77-027a, USEPA, Office of Research and Development, 1977.

6. Method 2A: Direct Measurement of Gas Volume Through Pipes and Small Ducts. 40 CFR Part 60 Appendix A.

7. Burdette, G.J. Health & Safety Exec., Research & Lab. Services Div. , London, "Proposed Analytical Method for Determination of Asbestos in Air."

8. Chatfield, E.J., Chatfield Tech. Cons., Ltd., Clark, T., PEI Assoc. "Standard Operating Procedure for Determination of Airborne Asbestos Fibers by Transmission Electron Microscopy Using Polycarbonate Membrane Filters." WERL SOP 87-1, March 5, 1987.

9. NIOSH. Method 7402 for Asbestos Fibers, December 11, 1986 Draft.

10. Yamate, G., S.C. Agarwall, R.D. Gibbons, IIT Research Institute, "Methodology for the Measurement of Airborne Asbestos by Electron Microscopy." Draft report, USEPA Contract 68-02-3266, July 1984.

11. Guidance to the Preparation of Quality Assurance Project Plans. USEPA, Office of Toxic Substances, 1984.

IV. Mandatory Interpretation of Transmission Electron Microscopy Results to Determine Completion of Response Actions

A. Introduction

A response action is determined to be completed by TEM when the abatement area has been cleaned and the airborne asbestos concentration inside the abatement area is no higher than concentrations at locations outside the abatement area. "Outside" means outside the abatement area, but not necessarily outside the building. EPA reasons that an asbestos removal contractor cannot be expected to clean an abatement area to an airborne asbestos concentration that is lower than the concentration of air entering the abatement area from outdoors or from other parts of the building. After the abatement area has passed a thorough visual inspection, and before the outer containment barrier is removed, a minimum of five air samples inside the abatement area and a minimum of five air samples outside the abatement area must be collected. Hence, the response action is determined to be completed when the average airborne asbestos concentration measured inside the abatement area is not statistically different from the average airborne asbestos concentration measured outside the abatement area.

The inside and outside concentrations are compared by the Z-test, a statistical test that takes into account the variability in the measurement process. A minimum of five samples inside the abatement area and five samples outside the abatement area are required to control the false negative error rate, i.e., the probability of declaring the removal complete when, in fact, the air concentration inside the abatement area is significantly higher than outside the abatement area. Additional quality control is provided by requiring three blanks (filters through which no air has been drawn) to be analyzed to check for unusually high filter contamination that would distort the test results.

When volumes greater than or equal to 1,199 L for a 25 mm filter and 2,799 L for a 37 mm filter have been collected and the average number of asbestos structures on samples inside the abatement area is no greater than 70 s/mm² of filter, the response action may be considered complete without comparing the inside samples to the outside samples. EPA is permitting this initial screening test to save analysis costs in situations where the airborne asbestos concentration is sufficiently low so that it cannot be distinguished from the filter contamination/background level (fibers deposited on the filter that are unrelated to the air being sampled). The screening test cannot be used when volumes of less than 1,199 L for 25 mm filter or 2,799 L for a 37 mm filter are collected because the ability to distinguish levels significantly different from filter background is reduced at low volumes.

The initial screening test is expressed in tructures per square millimeter of filter because filter background levels come from ources other than the air being sampled and cannot be meaningfully expressed as a oncentration per cubic centimeter of air. The value of 70 s/mm² is based on the experience of the panel of microscopists who onsider one structure in 10 grid openings each grid opening with an area of 0.0057 mm²) to be comparable with contaminaion/background levels of blank filters. The ecision is based, in part, on Poisson statiscs which indicate that four structures must be counted on a filter before the fiber ount is statistically distinguishable from he count for one structure. As more information on the performance of the method is ollected, this criterion may be modified. ince different combinations of the number nd size of grid openings are permitted nder the TEM protocol, the criterion is exressed in structures per square millimeter filter to be consistent across all combinations. Four structures per 10 grid openings corresponds to approximately 70 s/mm².

B. Sample Collection and Analysis

1. A minimum of 13 samples is required: five samples collected inside the abatement area, five samples collected outside the abatement area, two field blanks, and one sealed blank.

2. Sampling and TEM analysis must be done according to either the mandatory or nonmandatory protocols in Appendix A. At least 0.057 mm² of filter must be examined on blank filters.

C. Interpretation of Results

1. The response action shall be considered complete if either:

a. Each sample collected inside the abatement area consists of at least 1,199 L of air for a 25 mm filter, or 2,799 L of air for a 37 mm filter, and the arithmetic mean of their asbestos structure concentrations per square millimeter of filter is less than or equal to 70 s/mm²; or

b. The three blank samples have an arithmetic mean of the asbestos structure concentration on the blank filters that is less than or equal to 70 s/mm² and the average airborne asbestos concentration measured inside the abatement area is not statistically higher than the average airborne asbestos concentration measured outside the abatement area as determined by the Z-test. The Z-test is carried out by calculating

$$Z = \frac{\bar{Y}_I - \bar{Y}_O}{0.8(1/n_I + 1/n_O)^{1/2}}$$

where Y_I is the average of the natural logarithms of the inside samples and Y_O is the average of the natural logarithms of the outside samples, n_I is the number of inside samples and n_O is the number of outside samples. The response action is considered complete if Z is less than or equal to 1.65.

NOTE: When no fibers are counted, the calculated detection limit for that analysis is inserted for the concentration.

2. If the abatement site does not satisfy either (1) or (2) of this Section C, the site must be recleaned and a new set of samples collected.

D. Sequence for Analyzing Samples

It is possible to determine completion of the response action without analyzing all samples. Also, at any point in the process, a decision may be made to terminate the analysis of existing samples, reclean the abatement site, and collect a new set of samples. The following sequence is outlined to minimize the number of analyses needed to reach a decision.

1. Analyze the inside samples.

2. If at least 1,199 L of air for a 25 mm filter or 2,799 L of air for a 37 mm filter is collected for each inside sample and the arithmetic mean concentration of structures per square millimeter of filter is less than or equal to 70 s/mm^2, the response action is complete and no further analysis is needed.

3. If less than 1,199 L of air for a 25 mm filter or 2,799 L of air for a 37 mm filter is collected for any of the inside samples, or the arithmetic mean concentration of structures per square millimeter of filter is greater than 70 s/mm^2, analyze the three blanks.

4. If the arithmetic mean concentration of structures per square millimeter on the blank filters is greater than 70 s/mm^2, terminate the analysis, identify and correct the source of blank contamination, and collect a new set of samples.

5. If the arithmetic mean concentration of structures per square millimeter on the blank filters is less than or equal to 70 s/mm^2, analyze the outside samples and perform the Z-test.

6. If the Z-statistic is less than or equal to 1.65, the response action is complete. If the Z-statistic is greater than 1.65, reclean the abatement site and collect a new set of samples.

[52 FR 41857, Oct. 30, 1987]

APPENDIX B TO SUBPART E—WORK PRACTICES AND ENGINEERING CONTROLS FOR SMALL-SCALE, SHORT-DURATION OPERATIONS MAINTENANCE AND REPAIR (O&M) ACTIVITIES INVOLVING ACM

This appendix is not mandatory, in that LEAs may choose to comply with all the requirements of 40 CFR 763.121. Section 763.91(b) extends the protection provided by EPA in its 40 CFR 763.121 for worker protection during asbestos abatement projects to employees of local education agencies who perform small-scale, short-duration operations, maintenance and repair (O&M) activities involving asbestos-containing materials and are not covered by the OSHA asbestos construction standard at 29 CFR 1926.58 or an asbestos worker protection standard adopted by a State as part of a State plan approved by OSHA under section 18 of the Occupational Safety and Health Act. Employers wishing to be exempt from the requirements of § 763.121 (e)(6) and (f)(2)(i) may instead comply with the provisions of this appendix when performing small-scale, short-duration O&M activities.

Definition of Small-Scale, Short-Duration Activities

For the purposes of this appendix, small-scale, short-duration maintenance activities are tasks such as, but not limited to:

1. Removal of asbestos-containing insulation on pipes.

2. Removal of small quantities of asbestos-containing insulation on beams or above ceilings.

3. Replacement of an asbestos-containing gasket on a valve.

4. Installation or removal of a small section of drywall.

5. Installation of electrical conduits through or proximate to asbestos-containing materials.

Small-scale, short-duration maintenance activities can be further defined, for the purposes of this subpart, by the following considerations:

1. Removal of small quantities of asbestos containing materials (ACM) only if required in the performance of another maintenance activity not intended as asbestos abatement.

2. Removal of asbestos-containing thermal system insulation not to exceed amounts greater than those which can be contained in a single glove bag.

3. Minor repairs to damaged thermal system insulation which do not require removal.

4. Repairs to a piece of asbestos-containing wallboard.

5. Repairs, involving encapsulation, enclosure or removal, to small amounts of friable asbestos-containing material only if required in the performance of emergency or routine maintenance activity and not intended solely as asbestos abatement. Such work may not exceed amounts greater than those which can be contained in a single prefabricated minienclosure. Such an enclosure shall conform spatially and geometrically to the localized work area, in order to perform its intended containment function.

OSHA concluded that the use of certain engineering and work practice controls is capable of reducing employee exposures to asbestos to levels below the final standard's action level (0.1 f/cm^3). (See 51 FR 22714, June 20, 1986.) Several controls and work practices, used either singly or in combination, can be employed effectively to reduce asbestos exposures during small maintenance and renovation operations. These include:

1. Wet methods.

2. Removal methods.

i. Use of glove bags.

ii. Removal of entire asbestos insulated pipes or structures.

iii. Use of minienclosures.

3. Enclosure of asbestos materials.
4. Maintenance programs.

This appendix describes these controls and work practices in detail.

Preparation of the Area Before Renovation or Maintenance Activities

The first step in preparing to perform a mall-scale, short-duration asbestos renova- ion or maintenance task, regardless of the batement method that will be used, is the emoval from the work area of all objects hat are movable to protect them from as- estos contamination. Objects that cannot e removed must be covered completely ith 6-mil-thick polyethylene plastic sheet- g before the task begins. If objects have lready been contaminated, they should be oroughly cleaned with a High Efficiency articulate Air (HEPA) filtered vacuum or e wet-wiped before they are removed from he work area or completely encased in the astic.

Wet methods. Whenever feasible, and re- rdless of the abatement method to be ed (e.g., removal, enclosure, use of glove gs), wet methods must be used during all-scale, short-duration maintenance and novation activities that involve disturbing bestos-containing materials. Handling as- stos materials wet is one of the most reli- le methods of ensuring that asbestos ers do not become airborne, and this actice should therefore be used whenever sible. Wet methods can be used in the eat majority of workplace situations. Only cases where asbestos work must be per- rmed on live electrical equipment, on live am lines, or in other areas where water l seriously damage materials or equip- nt may dry removal be performed. ended water or another wetting agent uld be applied by means of an airless ayer to minimize the extent to which the estos-containing material is disturbed.

sbestos-containing material should be ted from the initiation of the mainte- ce or renovation operation and wetting nts should be used continually through- the work period to ensure that any dry estos-containing material exposed in the rse of the work is wet and remains wet il final disposal.

emoval of small amount of asbestos-con- ing materials. Several methods can be d to remove small amounts of asbestos- taining materials during small-scale, rt-duration renovation or maintenance s. These include the use of glove bags, removal of an entire asbestos-covered e or structure, and the construction of ienclosures. The procedures that em- ers must use for each of these oper- ns if they wish to avail themselves of rule's exemptions are described in the wing sections.

Glove bags. OSHA found that the use of glove bags to enclose the work area during small-scale, short-duration maintenance or renovation activities will result in employee exposure to asbestos that are below the rule's action level of 0.1 f/cm^3. This appendix provides requirements for glove-bag procedures to be followed by employers wishing to avail themselves of the rule's exemption for each activity. OSHA has determined that the use of these procedures will reduce the 8-hour time weighted average (TWA) exposure of employees involved in these work operations to levels below the action level and will thus provide a degree of employee protection equivalent to that provided by compliance with all provisions of the rule.

Glove bag installation. Glove bags are approximately 40-inch-wide times 64-inch-long bags fitted with arms through which the work can be performed. When properly installed and used, they permit workers to remain completely isolated from the asbestos material removed or replaced inside the bag. Glove bags can thus provide a flexible, easily installed, and quickly dismantled temporary small work area enclosure that is ideal for small-scale asbestos renovation or maintenance jobs. These bags are single-use control devices that are disposed of at the end of each job. The bags are made of transparent 6-mil-thick polyethylene plastic with areas of Tyvek[1] material (the same material used to make the disposal protective suits used in major asbestos removal, renovation, and demolition operations and in protective gloves). Glove bags are readily available from safety supply stores or specialty asbestos removal supply houses. Glove bags come pre-labelled with the asbestos warning label prescribed by OSHA and EPA for bags used to dispose of asbestos waste.

Glove bag equipment and supplies. Supplies and materials that are necessary to use glove bags effectively include:

1. Tape to seal glove bag to the area from which asbestos is to be removed.
2. Amended water or other wetting agents.
3. An airless sprayer for the application of the wetting agent.
4. Bridging encapsulant (a paste-like substance for coating asbestos) to seal the rough edges of any asbestos-containing materials that remain within the glove bag at the points of attachment after the rest of the asbestos has been removed.
5. Tools such as razor knives, nips, and wire brushes (or other tools suitable for cutting wires, etc.).

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[1] Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

6. A HEPA filter-equipped vacuum for evacuating the glove bag (to minimize the release of asbestos fibers) during removal of the bag from the work area and for cleaning any material that may have escaped during the installation of the glove bag.

7. HEPA-equipped dual-cartridge or more protective respirators for use by the employees involved in the removal of asbestos with the glove bag.

Glove bag work practices. The proper use of glove bags requires the following steps:

1. Glove bags must be installed so that they completely cover the pipe or other structure where asbestos work is to be done. Glove bags are installed by cutting the sides of the glove bag to fit the size of the pipe from which asbestos is to be removed. The glove bag is attached to the pipe by folding the open edges together and securely sealing them with tape. All openings in the glove bag must be sealed with duct tape or equivalent material. The bottom seam of the glove bag must also be sealed with duct tape or equivalent to prevent any leakage from the bag that may result from a defect in the bottom seam.

2. The employee who is performing the asbestos removal with the glove bag must don at least a half mask dual-cartridge HEPA-equipped respirator; respirators should be worn by employees who are in close contact with the glove bag and who may thus be exposed as a result of small gaps in the seams of the bag or holes punched through the bag by a razor knife or a piece of wire mesh.

3. The removed asbestos material from the pipe or other surface that has fallen into the enclosed bag must be thoroughly wetted with a wetting agent (applied with an airless sprayer through the precut port provided in most gloves bags or applied through a small hole in the bag).

4. Once the asbestos material has been thoroughly wetted, it can be removed from the pipe, beam, or other surface. The choice of tool to use to remove the asbestos-containing material depends on the type of material to be removed. Asbestos-containing materials are generally covered with painted canvas and/or wire mesh. Painted canvas can be cut with a razor knife and peeled away from the asbestos-containing material underneath. Once the canvas has been peeled away, the asbestos-containing material underneath may be dry, in which case it should be resprayed with a wetting agent to ensure that it generates as little dust as possible when removed. If the asbestos-containing material is covered with wire mesh, the mesh should be cut with nips, tin snips, or other appropriate tool and removed.

A wetting agent must then be used to spray any layer of dry material that is exposed beneath the mesh, the surface of the stripped underlying structure, and the inside of the glove bag.

5. After removal of the layer of asbestos-containing material, the pipe or surface from which asbestos has been removed must be thoroughly cleaned with a wire brush and wet-wiped with a wetting agent until no traces of the asbestos-containing material can be seen.

6. Any asbestos-containing insulation edges that have been exposed as a result of the removal or maintenance activity must be encapsulated with bridging encapsulant to ensure that the edges do not release asbestos fibers to the atmosphere after the glove bag has been removed.

7. When the asbestos removal and encapsulation have been completed, a vacuum hose from a HEPA filtered vacuum must be inserted into the glove bag through the port to remove any air in the bag that may contain asbestos fibers. When the air has been removed from the bag, the bag should be squeezed tightly (as close to the top as possible), twisted, and sealed with tape, to keep the asbestos materials safely in the bottom of the bag. The HEPA vacuum can then be removed from the bag and the glove bag itself can be removed from the work area to be disposed of properly.

Minienclosures. In some instances, such as removal of asbestos from a small ventilation system or from a short length of duct, a glove bag may not be either large enough or of the proper shape to enclose the work area. In such cases, a minienclosure can be built around the area where small-scale short-duration asbestos maintenance or renovation work is to be performed. Such enclosures should be constructed of 6-mil-thick polyethylene plastic sheeting and can be small enough to restrict entry to the asbestos work area to one worker.

For example, a minienclosure can be built in a small utility closet when asbestos-containing duct covering is to be removed. The enclosure is constructed by:

1. Affixing plastic sheeting to the walls with spray adhesive and tape.

2. Covering the floor with plastic and sealing the plastic covering the floor to the plastic on the walls.

3. Sealing any penetrations such as pipes or electrical conducts with tape.

4. Constructing a small change room (approximately 3 feet square) made of 6-mil-thick polyethylene plastic supported by 2-inch by 4-inch lumber (the plastic should be attached to the lumber supports with staples or spray adhesive and tape).

The change room should be contiguous to the minienclosure, and is necessary to allow the worker to vacuum off his protective coveralls and remove them before leaving the work area. While inside minienclosure, the worker should wear Tyvek[1] disposable coveralls and use the appropriate HEPA-fi-tered dual-cartridge or more protective respiratory protection.

The advantages of minienclosures are that they limit the spread of asbestos contamination, reduce the potential exposure of bystanders and other workers who may be working in adjacent areas, and are quick and easy to install. The disadvantage of minienclosures is that they may be too mall to contain the equipment necessary to reate a negative pressure within the encloure; however the double layer of plastic heeting will serve to restrict the release of sbestos fibers to the area outside the encloure.

Removal of entire structures. When pipes re insulated with asbestos-containing mateials, removal of the entire pipe may be more protective, easier, and more cost-effecive than stripping the asbestos insulation rom the pipe. Before such a pipe is cut, the sbestos-containing insulation must be rapped with 6-mil polyethylene plastic and ecurely sealed with duct tape or equivalent. his plastic covering will prevent asbestos bers from becoming airborne as a result of e vibration created by the power saws ed to cut the pipe. If possible, the pipes ould be cut at locations that are not insuted to avoid disturbing the asbestos. If a pe is completely insulated with asbestosntaining materials, small sections should stripped using the glove-bag method deribed above before the pipe is cut at the ipped sections.

Enclosure. The decision to enclose rather an remove asbestos-containing material om an area depends on the building ner's preference, i.e., for removal or connment. Owners consider such factors as t effectiveness, the physical configuran of the work area, and the amount of ffic in the area when determining which atement method to use.

f the owner chooses to enclose the struce rather than to remove the asbestostaining material insulating it, a solid ucture (airtight walls and ceilings) must built around the asbestos covered pipe or ucture to prevent the release of asbestostaining materials into the area beyond enclosure and to prevent disturbing se materials by casual contact during ure maintenance operations.

uch a permanent (i.e., for the life of the ding) enclosure should be built of new struction materials and should be impact stant and airtight. Enclosure walls uld be made of tongue-and-groove rds, boards with spine joints, or gypsum rds having taped seams. The underlying cture must be able to support the ght of the enclosure. (Suspended ceilings laid-in panels do not provide airtight osures and should not be used to enclose ctures covered with asbestos-containing erials.) All joints between the walls and ceiling of the enclosure should be caulked to prevent the escape of asbestos fibers. During the installation of enclosures, tools that are used (such as drills or rivet tools) should be equipped with HEPA-filtered vacuums. Before constructing the enclosure, all electrical conduits, telephone lines, recessed lights, and pipes in the area to be enclosed should be moved to ensure that the enclosure will not have to be re-opened later for routine or emergency maintenance. If such lights or other equipment cannot be moved to a new location for logistic reasons, or if moving them will disturb the asbestos-containing materials, removal rather than enclosure of the asbestos-containing materials is the appropriate control method to use.

Maintenance program. An asbestos maintenance program must be initiated in all facilities that have friable asbestos-containing materials. Such a program should include:

1. Development of an inventory of all asbestos-containing materials in the facility.
2. Periodic examination of all asbestos-containing materials to detect deterioration.
3. Written procedures for handling asbestos materials during the performance of small-scale, short-duration maintenance and renovation activities.
4. Written procedures for asbestos disposal.
5. Written procedures for dealing with asbestos-related emergencies.

Members of the building's maintenance engineering staff (electricians, heating/air conditioning engineers, plumbers, etc.) who may be required to handle asbestos-containing materials should be trained in safe procedures. Such training should include at a minimum:

1. Information regarding types of ACM and its various uses and forms.
2. Information on the health effects associated with asbestos exposure.
3. Descriptions of the proper methods of handling asbestos-containing materials.
4. Information on the use of HEPA-equipped dual-cartridge respirators and other personal protection during maintenance activities.

Prohibited activities. The training program for the maintenance engineering staff should describe methods of handling asbestos-containing materials as well as routine maintenance activities that are prohibited when asbestos-containing materials are involved. For example, maintenance staff employees should be instructed:

1. *Not* to drill holes in asbestos-containing materials.
2. *Not* to hang plants or pictures on structures covered with asbestos-containing materials.
3. *Not* to sand asbestos-containing floor tile.

4. *Not* to damage asbestos-containing materials while moving furniture or other objects.

5. *Not* to install curtains, drapes, or dividers in such a way that they damage asbestos-containing materials.

6. *Not* to dust floors, ceilings, moldings or other surfaces in asbestos-contaminated environments with a dry brush or sweep with a dry broom.

7. *Not* to use an ordinary vacuum to clean up asbestos-containing debris.

8. *Not* to remove ceiling tiles below asbestos-containing materials without wearing the proper respiratory protection, clearing the area of other people, and observing asbestos removal waste disposal procedures.

9. *Not* to remove ventilation system filters dry.

10. *Not* to shake ventilation system filters.

[52 FR 41894, Oct. 30, 1987]

APPENDIX C TO SUBPART E—EPA MODEL CONTRACTOR ACCREDITATION PLAN

I. Model Contractor Accreditation Plan for States

The Model Contractor Accreditation Plan for States has six components:

(1) Initial training,
(2) Examinations,
(3) Refresher training course,
(4) Qualifications,
(5) Decertification requirements,
(6) Reciprocity.

For purposes of TSCA Title II accreditation requirements, the duration of initial and refresher training courses is specified in number of days. A day of training equals 8 hours including breaks and lunch.

In several instances, initial training courses for a specific discipline (e.g., workers, inspectors) require hands-on training. For asbestos abatement contractors, supervisors and workers, hands-on training should include working with asbestos-substitute materials, fitting and using respirators, use of glovebags, donning protective clothing, constructing a decontamination unit as well as other abatement work activities. Hands-on training must permit contractors, supervisors, and workers to have actual experience performing tasks associated with asbestos abatement. For inspectors, hands-on training should include conducting a simulated building walk-through inspection and respirator fit testing.

1. Initial Training

States have the option to provide initial training directly or approve other entities to offer training. The following are the initial training course requirements for persons required to have accreditation under TSCA Title II.

A. *Inspectors.* A State shall require that all persons seeking accreditation as inspectors complete a 3-day training course as outlined below. The 3-day program shall include lectures, demonstrations, 4-hours of hands-on training, individual respirator fit testing, course review and a written examination. EPA recommends the use of audiovisual materials to complement lectures where appropriate.

The inspector training course shall adequately address the following topics:

(a) *Background information on asbestos.* Identification of asbestos, and examples and discussion of the uses and locations of asbestos in buildings; physical appearance of asbestos.

(b) *Potential health effects related to asbestos exposure.* The nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; the synergistic effect between cigarette smoking and asbestos exposure; the latency period for asbestos-related diseases; a discussion of the relationship of asbestos exposure to asbestosis, lung cancer, mesothelioma, and cancer of other organs.

(c) *Functions/qualifications and role of inspectors.* Discussions of prior experience and qualifications for inspectors and management planners; discussions of the functions of an accredited inspector as compared to those of an accredited management planner; discussion of inspection process including inventory of ACM and physical assessment.

(d) *Legal liabilities and defenses.* Responsibilities of the inspector and management planner; a discussion of comprehensive general liability policies, claims-made and occurrence policies, environmental and pollution liability policy clauses; State liability insurance requirements; bonding and the relationship of insurance availability to bond availability.

(e) *Understanding building systems.* The interrelationship between building systems including: An overview of common building physical plan layout; heat, ventilation and air conditioning (HVAC) system types, physical organization, and where asbestos is found on HVAC components; building mechanical systems, their types and organization, and where to look for asbestos on such systems; inspecting electrical systems, including appropriate safety precautions; reading blueprints and as-built drawings.

(f) *Public/employee/building occupant relations.* Notifying employee organizations about the inspection; signs to warn building occupants; tact in dealing with occupants and the press; scheduling of inspections to minimize disruption; and education of building occupants about actions being taken.

(g) *Pre-inspection planning and review of previous inspection records.* Scheduling the inspection and obtaining access; building record review; identification of probable homogeneous areas from blueprints or as-built drawings; consultation with maintenance or building personnel; review of previous inspection, sampling and abatement records of a building; the role of the inspector in exclusions for previously performed inspections.

(h) *Inspecting for friable and non-friable asbestos-containing material (ACM) and assessing the condition of friable ACM.* Procedures to follow in conducting visual inspections for friable and non-friable ACM; types of building materials that may contain asbestos; touching materials to determine friability; open return air plenums and their importance in HVAC systems; assessing damage, significant damage, potential damage, and potential significant damage; amount of suspected ACM, both in total quantity and as a percentage of the total area; type of damage; accessibility; material's potential for disturbance; known or suspected causes of damage or significant damage; and deterioration as assessment factors.

(i) *Bulk sampling/documentation of asbestos in schools.* Detailed discussion of the Simplified Sampling Scheme for Friable Surfacing Materials (EPA 560/5-85-030a October 1985);" techniques to ensure sam-ling in a randomly distributed manner for ther than friable surfacing materials; sam-ling of non-friable materials; techniques r bulk sampling; sampling equipment the spector should use; patching or repair of amage done in sampling; an inspector's pair kit; discussion of polarized light mi-oscopy; choosing an accredited laboratory analyze bulk samples; quality control and ality assurance procedures.

(j) *Inspector respiratory protection and rsonal protective equipment.* Classes and aracteristics of respirator types; limita-ns of respirators; proper selection, inspec-n, donning, use, maintenance, and storage ocedures for respirators; methods for field ting of the facepiece-to-mouth seal (posi-e and negative pressure fitting tests); alitative and quantitative fit testing pro-dures; variability between field and labo-ory protection factors; factors that alter pirator fit (e.g., facial hair); the compo-ts of a proper respiratory protection pro-m; selection and use of personal protec-clothing; use, storage, and handling of -disposable clothing.

(k) *Recordkeeping and writing the inspec- report.* Labeling of samples and keying ple identification to sampling location; ommendations on sample labeling; detail- of ACM inventory; photographs of se-ed sampling areas and examples of ACM dition; information required for inclusion in the management plan by TSCA Title II section 203(i)(1).

(l) *Regulatory review.* EPA Worker Protection Rule found at 40 CFR Part 763, subpart G; TSCA Title II; OSHA Asbestos Construction Standard 29 CFR 1926.58; OSHA respirator requirements found at 29 CFR 1910.134; the Friable ACM in Schools Rule found at 40 CFR Part 763, subpart F; applicable State and local regulations, and differences in Federal/State requirements where they apply and the effects, if any, on public and non-public schools.

(m) *Field trip.* To include a field exercise including a walk-through inspection; on-site discussion on information gathering and determination of sampling locations; on-site practice in physical assessment; classroom discussion of field exercise.

(n) *Course review.* A review of key aspects of the training course.

B. Management Planners. A State shall require that all persons seeking accreditation as management planners complete an inspection training course as outlined above and a 2-day management planning training course. The 2-day training program shall include lectures, demonstrations, course review, and a written examination. EPA recommends the use of audiovisual materials to complement lectures, where appropriate.

The management planner training course shall adequately address the following topics:

(a) *Course overview.* The role of the management planner; operations and maintenance programs; setting work priorities; protection of building occupants.

(b) *Evaluation/interpretation of survey results.* Review of TSCA Title II requirements for inspection and management plans as given in section 203(i)(1) of TSCA Title II; summarized field data and laboratory results; comparison between field inspector's data sheet with laboratory results and site survey.

(c) *Hazard assessment.* Amplification of the difference between physical assessment and hazard assessment; the role of the management planner in hazard assessment; explanation of significant damage, damage, potential damage, and potential significant damage; use of a description (or decision tree) code for assessment of ACM; assessment of friable ACM; relationship of accessibility, vibration sources, use of adjoining space, and air plenums and other factors to hazard assessment.

(d) *Legal implications.* Liability; insurance issues specific to planners; liabilities associated with interim control measures, in-house maintenance, repair, and removal; use of results from previously performed inspections.

(e) *Evaluation and selection of control options.* Overview of encapsulation, enclosure, interim operations and maintenance, and removal; advantages and disadvantages of each method; response actions described via a decision tree or other appropriate method; work practices for each response action; staging and prioritizing of work in both vacant and occupied buildings; the need for containment barriers and decontamination in response actions.

(f) *Role of other professionals.* Use of industrial hygienists, engineers, and architects in developing technical specifications for response actions; any requirements that may exist for architect sign-off of plans; team approach to design of high-quality job specifications.

(g) *Developing an operations and maintenance (O&M) plan.* Purpose of the plan; discussion of applicable EPA guidance documents; what actions should be taken by custodial staff; proper cleaning procedures; steam cleaning and high efficiency particulate aerosol (HEPA) vacuuming; reducing disturbance of ACM; scheduling O&M for off-hours; rescheduling or canceling renovation in areas with ACM; boiler room maintenance; disposal of ACM; in-house procedures for ACM—bridging and penetrating encapsulants; pipe fittings; metal sleeves; polyvinyl chloride (PVC), canvas, and wet wraps; muslin with straps; fiber mesh cloth; mineral wool, and insulating cement; discussion of employee protection programs and staff training; case study in developing an O&M plan (development, implementation process, and problems that have been experienced).

(h) *Regulatory review.* Focusing on the OSHA Asbestos Construction Standard found at 29 CFR 1926.58; the National Emission Standard for Hazardous Air Pollutants (NESHAPS) found at 40 CFR Part 61, subparts A (General Provisions) and M (National Emission Standard for Asbestos); EPA Worker Protection Rule found at 40 CFR Part 763, subpart G; TSCA Title II; applicable State regulations.

(i) *Recordkeeping for the management planner.* Use of field inspector's data sheet along with laboratory results; on-going recordkeeping as a means to track asbestos disturbance; procedures for recordkeeping.

(j) *Assembling and submitting the management plan.* Plan requirements in TSCA Title II section 203(i)(1); the management plan as a planning tool.

(k) *Financing abatement actions.* Economic analysis and cost estimates; development of cost estimates; present costs of abatement versus future operations and maintenance costs; Asbestos School Hazard Abatement Act grants and loans.

(l) *Course review.* A review of key aspects of the training course.

C. Abatement Project Designers. A State shall require that all persons seeking accreditation as abatement project designers complete either a 3-day abatement p designer training course as outlined or the 4-day asbestos abatement cont and supervisor's training course that i lined in the next sub-unit. The 3-day ment project designer training pro shall include lectures, demonstratio field trip, course review, and a writte amination. EPA recommends the u audiovisual materials to complement tures, where appropriate.

The 3-day abatement project des training course shall adequately addres following topics:

(a) *Background information on asb* Identification of asbestos; examples an cussion of the uses and locations of asb in buildings; physical appearance of a tos.

(b) *Potential health effects related t bestos exposure.* Nature of asbestos-re diseases; routes of exposure; dose-resp relationships and the lack of a safe e sure level; the synergistic effect betw cigarette smoking and asbestos expo the latency period of asbestos-related eases; a discussion of the relationship tween asbestos exposure and asbest lung cancer, mesothelioma, and cance other organs.

(c) *Overview of abatement construc projects.* Abatement as a portion of a ovation project; OSHA requirements for tification of other contractors on a m employer site (29 CFR 1926.58).

(d) *Safety system design specificati* Construction and maintenance of cont ment barriers and decontamination en sure systems; positioning of warning si electrical and ventilation system lock- proper working techniques for minimiz fiber release; entry and exit procedures the work area; use of wet methods; use negative pressure exhaust ventilation equ ment; use of high efficiency particulate a osol (HEPA) vacuums; proper clean-up a disposal of asbestos; work practices as th apply to encapsulation, enclosure, a repair; use of glove bags and a demonst tion of glove bag use.

(e) *Field trip.* Visit an abatement site other suitable building site, including site discussions of abatement design, bui ing walk-through inspection, and discussi following the walk-through.

(f) *Employee personal protective equ ment.* To include the classes and characte istics of respirator types; limitations of re pirators; proper selection, inspection, do ning, use, maintenance, and storage proc dures; methods for field testing of the fac piece-to-face seal (positive and negati pressure fitting tests); qualitative and qua titative fit testing procedures; variability be tween field and laboratory protection fac tors; factors that alter respirator fit (e.g.

facial hair); components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposable clothing; and regulations covering personal protective equipment.

(g) *Additional safety hazards.* Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards.

(h) *Fiber aerodynamics and control.* Aerodynamic characteristics of asbestos fibers; importance of proper containment barriers; settling time for asbestos fibers; wet methods in abatement; aggressive air monitoring following abatement; aggressive air movement and negative pressure exhaust ventilation as a clean-up method.

(i) *Designing abatement solutions.* Discussions of removal, enclosure, and encapsulation methods; asbestos waste disposal.

(j) *Budgeting/cost estimation.* Development of cost estimates; present costs of abatement versus future operations and maintenance costs; setting priorities for abatement jobs to reduce cost.

(k) *Writing abatement specifications.* Means and methods specifications versus performance specifications; design of abatement in occupied buildings; modification of guide specifications to a particular building; worker and building occupant health/medical considerations; replacement of ACM with non-asbestos substitutes; clearance of work area after abatement; air monitoring for clearance.

(l) *Preparing abatement drawings.* Use of as-built drawings; use of inspection photographs and on-site reports; particular problems in abatement drawings.

(m) *Contract preparation and administration.*

(n) *Legal/liabilities/defenses.* Insurance considerations; bonding; hold harmless clauses; use of abatement contractor's liability insurance; claims-made versus occurrence policies.

(o) *Replacement.* Replacement of asbestos with asbestos-free substitutes.

(p) *Role of other consultants.* Development of technical specification sections by industrial hygienists or engineers; the multi-disciplinary team approach to abatement design.

(q) *Occupied buildings.* Special design procedures required in occupied buildings; education of occupants; extra monitoring recommendations; staging of work to minimize occupant exposure; scheduling of renovation to minimize exposure.

(r) *Relevant Federal State, and local regulatory requirements.* Procedures and standards, including:

(1) Requirements of TSCA Title II.

(2) 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, subparts A (General Provisions) and M (National Emission Standard for Asbestos).

(3) OSHA standards for permissible exposure to airborne concentrations of asbestos fibers and respiratory protection (29 CFR 1910.134).

(4) EPA Worker Protection Rule, found at 40 CFR Part 763, subpart G.

(5) OSHA Asbestos Construction Standard found at 29 CFR 1926.58.

(s) *Course Review.* A review of key aspects of the training course.

D. *Asbestos Abatement Contractors and Supervisors.* A State shall require that all persons seeking accreditation as asbestos abatement contractors or supervisors complete a 4-day training course as outlined below. The training course shall include lectures, demonstrations, at least 6 hours of hands-on training, individual respirator fit testing, course review, and a written examination. EPA recommends the use of audiovisual materials to complement lectures, where appropriate.

The contractor may designate a supervisor to serve as his agent for the purposes of the accreditation requirement. For purposes of TSCA Title II accreditation, asbestos abatement supervisors include those persons who provide supervision and direction to workers engaged in asbestos removal, encapsulation, enclosure, and repair. Supervisors may include those individuals with the position title of foreman, working foreman, or leadman pursuant to collective bargaining agreements. Under this Model Plan, at least one supervisor is required to be at the worksite at all times while work is in progress. Asbestos workers must have access to accredited supervisors throughout the duration of the project.

The contractor and supervisor's training course shall adequately address the following topics:

(a) *The physical characteristics of asbestos, and asbestos-containing materials.* Identification of asbestos, aerodynamic characteristics, typical uses, physical appearance, a review of hazard assessment considerations, and a summary of abatement control options.

(b) *Potential health effects related to asbestos exposure.* The nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; synergism between cigarette smoking and asbestos exposure; latency period for disease.

(c) *Employee personal protective equipment.* Classes and characteristics of respirator types; limitations of respirators and their proper selection, inspection, donning, use, maintenance, and storage procedures; methods for field testing of the facepiece-to-face seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that alter respirator fit (e.g., facial hair); the components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposable clothing; and regulations covering personal protective equipment.

(d) *State-of-the-art work practices.* Proper work practices for asbestos abatement activities including descriptions of proper construction and maintenance of barriers and decontamination enclosure systems; positioning of warning signs; electrical and ventilation system lockout; proper working techniques for minimizing fiber release; use of wet methods; use of negative pressure ventilation equipment; use of high efficiency particulate air (HEPA) vacuums; proper clean-up and disposal procedures. Work practices for removal, encapsulation, enclosure, and repair; emergency procedures for sudden releases; potential exposure situations; transport and disposal procedures, and recommended and prohibited work practices. Discussion of new abatement-related techniques and methodologies may be included.

(e) *Personal hygiene.* Entry and exit procedures for the work area; use of showers; and avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area. Potential exposures, such as family exposure, shall also be included.

(f) *Additional safety hazards.* Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards, scaffold and ladder hazards, slips, trips and falls, and confined spaces.

(g) *Medical monitoring.* OSHA requirements for a pulmonary function test, chest X-rays and a medical history for each employee.

(h) *Air monitoring.* Procedures to determine airborne concentrations of asbestos fibers, including a description of aggressive sampling, sampling equipment and methods, reasons for air monitoring, types of samples, and interpretation of results, specifically from analysis performed by polarized light, phase-contrast, and electron microscopy analyses.

(i) *Relevant Federal, State, and local regulatory requirements.* Procedures and standards, including:

(A) Requirements of TSCA Title II.

(B) 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, subparts A (General Provisions) and M (National Emission Standard for Asbestos).

(C) OSHA standards for permissible exposure to airborne concentrations of asbestos fibers and respiratory protection (29 CFR 1910.134).

(D) OSHA Asbestos Construction Stan ard (29 CFR 1926.58).

(E) EPA worker Protection Rule, 40 CF Part 763, subpart G.

(j) *Respiratory protection programs a medical surveillance programs.*

(k) *Insurance and liability issues.* Co tractor issues; worker's compensation cove age and exclusions; third-party liabiliti and defenses; insurance coverage and excl sions.

(l) *Recordkeeping for asbestos abatemen projects.* Records required by Federal, Stat and local regulations; records recommende for legal and insurance purposes.

(m) *Supervisory techniques for asbesto abatement activities.* Supervisory practice to enforce and reinforce the required wor practices and discourage unsafe work prac tices.

(n) *Contract specifications.* Discussion o key elements that are included in contrac specifications.

(o) *Course review.* A review of key aspect of the training course.

E. *Asbestos Abatement Workers.* Eac State shall require that all persons seekin accreditation as asbestos abatement worker complete at least a 3-day training course a outlined below. The worker training cours shall include lectures, demonstrations, a least 6 hours of hands-on training, individual respirator fit testing, course review, and an examination. EPA recommends the use of audiovisual materials to complement lectures, where appropriate.

The training course shall adequately address the following topics:

(a) *Physical characteristics of asbestos* Identification of asbestos, aerodynamic characteristics, typical uses, and physical appearance, and a summary of abatement control options.

(b) *Potential health effects related to asbestos exposure.* The nature of asbestos-related diseases, routes of exposure, dose-response relationships and the lack of a safe exposure level, synergism between cigarette smoking and asbestos exposure, and latency period for disease.

(c) *Employee personal protective equipment.* Classes and characteristics of respirator types; limitations of respirators and their proper selection, inspection, donning, use, maintenance, and storage procedures; methods for field testing of the facepiece-to-face seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that alter respirator fit (e.g., facial hair); the components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposal clothing; and regulations covering personal protective equipment.

(d) *State-of-the-art work practices.* Proper asbestos abatement activities including descriptions of proper construction and maintenance of barriers and decontamination enclosure systems; positioning of warning signs; electrical and ventilation system lockout; proper working techniques for minimizing fiber release; use of wet methods; use of negative pressure ventilation equipment; use of high efficiency particulate air (HEPA) vacuums; proper clean-up and disposal procedures; work practices for removal, encapsulation, enclosure, and repair; emergency procedures for sudden releases; potential exposure situations; transport and disposal procedures; and recommended and prohibited work practices.

(e) *Personal hygiene.* Entry and exit procedures for the work area; use of showers; avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area; and potential exposures, such as family exposure.

(f) *Additional safety hazards.* Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards, scaffold and ladder hazards, slips, trips and falls, and confined spaces.

(g) *Medical monitoring.* OSHA requirements for a pulmonary function test, chest X-rays and a medical history for each employee.

(h) *Air monitoring.* Procedures to determine airborne concentrations of asbestos fibers, focusing on how personal air sampling is performed and the reasons for it.

(i) *Relevant Federal, State and local regulatory requirements, procedures, and standards.* With particular attention directed at relevant EPA, OSHA, and State regulations concerning asbestos abatement workers.

(j) *Establishment of respiratory protection programs.*

(k) *Course review.* A review of key aspects of the training course.

2. Examinations

Each State shall administer a closed book examination or designate other entities such as State-approved training courses to administer the closed book examination to persons seeking accreditation who have completed an initial training course. Demonstration testing may also be included as part of the examination. A person seeking accreditation in a specific discipline shall pass the examination for that discipline to receive accreditation. For example, a person seeking accreditation as an inspector must pass the State's inspector accreditation examination.

States may develop their own examinations, have training courses develop examinations or use standardized examinations developed for purposes of TSCA Title II accreditation. The National Asbestos Council (NAC) is working with the Georgia Institute of Technology to develop standardized examinations for all disciplines. States may supplement standardized examinations with questions on State regulations. To receive more information on this topic, interested States should contact NAC at the following address: National Asbestos Council, Training Department, 2786 North Decatur Rd., Suite 260, Decatur, Georgia 30033.

Each examination shall adequately cover the topics included in the training course for that discipline. Persons who pass the State examination, and fulfill whatever other requirements the State imposes, must receive some form of identification indicating that they are accredited in a specific discipline. For example, a State may wish to provide each accredited person with a photoidentification card. Where necessary, States should consider developing examinations in languages other than English.

The following are the requirements for examinations in each area:

1. Inspectors:
i. 50 multiple choice questions.
ii. Passing score: 70 percent.
2. Management Planners:
i. 50 multiple choice questions.
ii. Passing score: 70 percent.
3. Abatement Project Designers:
i. 100 multiple choice questions.
ii. Passing score: 70 percent.
4. Asbestos abatement contractors and supervisors:
i. 100 multiple choice questions.
ii. Passing score: 70 percent.
5. Asbestos Abatement Workers:
i. 50 multiple choice questions.
ii. Passing score: 70 percent.

3. Refresher Training Courses

For all disciplines except inspectors, a State's accreditation program shall include a 1-day annual refresher training course for reaccreditation. Refresher courses for inspectors shall be a half-day in length. Management planners shall attend the inspector refresher course, plus an additional half-day on management planning.

The refresher course shall be specific to each discipline. For each discipline, the refresher course shall review and discuss changes in Federal and State regulations, developments in state-of-the-art procedures and a review of key aspects of the initial training course as determined by the State. After completing the annual refresher course, persons shall have their accreditation extended an additional year. A State may consider requiring persons to pass reaccreditation examinations at specific intervals (every 3 years, for example).

4. Qualifications

In addition to training and an examination, a State may require whatever qualifications and experience that the State considers appropriate for some or all disciplines. States may want to consider requiring qualifications similar to the examples outlined below for inspectors, management planners and abatement project designers. States should modify these as appropriate. In addition, States may want to include some requirements based on experience in conducting a task directly or in an apprenticeship role:

Inspectors

Qualifications—Possess a high school diploma.

States may want to require an Associate's Degree in particular fields (e.g., environmental or physical sciences).

Management Planners

Qualifications—Registered architect, engineer, or certified industrial hygienist or related scientific field.

Abatement Project Designer

Qualifications—Registered architect, engineer, or a certified industrial hygienist.

5. Decertification Requirements

A State must include conditions and procedures for decertifying accredited inspectors, management planners, abatement project designers, asbestos abatement contractors, supervisors and workers.

6. Reciprocity

EPA recommends that each State establish reciprocal arrangements with other States that have established accreditation programs that meet or exceed the EPA Model Plan.

II. EPA APPROVAL PROCESS FOR STATE CONTRACTOR ACCREDITATION PROGRAMS

States seeking EPA approval of their State Contractor Accreditation Programs required under TSCA shall follow the procedures outlined below. States may seek approval for some or all disciplines as specified in the Model Plan. For example, a State that currently only requires worker accreditation can receive EPA approval for that discipline alone. EPA encourages States that currently do not have accreditation requirements for all the disciplines required under TSCA to seek EPA approval for those disciplines the State does accredit. As States establish accreditation requirements for the remaining disciplines, the requested information outlined below should be submitted to EPA as soon as possible.

States seeking EPA approval shall submit the following information to the Regional Asbestos Coordinator at their EPA Regional Office:

(1) A copy of the legislation establi the State's accreditation program (if cable).

(2) A copy of the State's accreditatio ulations.

(3) A letter to the Regional Asbestos dinator that clearly indicates how the meets the program requirements of Model Contractor Accreditation Plan States. Addresses of Regional Asbesto ordinators are shown below:

Asbestos Coordinator, EPA, Region I, A
Management Div. (APT-231), JFK F
al Bldg., Boston, MA 02203, (617) 565-

Asbestos Coordinator, EPA, Region
Woodbridge Ave., Raritan Depot, Bldg
Edison, NJ 08837, (201) 321-6668, (
340-6671

Asbestos Coordinator, EPA, Region
(3HW-40), 841 Chestnut Bldg., Phil
phia, PA 19107, (215) 597-9859, (FTS)
9859

Asbestos Coordinator, EPA, Region IV,
Courtland St. NE., Atlanta, GA 30
(404) 347-3864, (FTS) 257-3864

Asbestos Coordinator, EPA, Region V,
S. Clark Street, Chicago, IL 60604, (
886-6879, (FTS) 886-6879

Asbestos Coordinator, 6t-Pt, EPA, Re
VI, 1445 Ross Avenue, Dallas, TX 75
2733, (214) 655-7244, (FTS) 255-7235

Asbestos Coordinator, EPA, Region VII,
Minnesota Ave., Kansas City, KS 66
(913) 236-2834, (FTS) 757-2834

Asbestos Coordinator, (8AT-TS), E
Region VIII, 1 Denver Place, 999–1
Street, Suite 1300, Denver, CO 80202-2
(303) 564-1730, (FTS) 564-1742

Asbestos Coordinator, (T-52), EPA, Reg
IX, 215 Fremont Street, San Francis
CA 94105, (415) 974-7290, (FTS) 454-7

Asbestos Coordinators, EPA, Region X, 1
Sixth Avenue, Seattle, WA- 98101, (2
442-2870, (FTS) 399-2870

EPA will publish a list of those Sta that have accreditation requirements th are at least as stringent as the EPA Mod for one or more disciplines. Any traini courses approved by such States are EP approved for purposes of accreditation.

III. EPA APPROVAL OF TRAINING COURSES

Individuals or groups wishing to sponso training courses for disciplines required be accredited under TSCA Title II ma apply for EPA approval. For a course to re ceive approval, it must meet the require ments for the course as outlined in th Model Plan for States. EPA will not revie courses that are already approved in a Sta that has a Contractor Accreditation Pro gram that meets the EPA Model. The courses already are approved under TSC Title II in the State where they are ap proved and in all States without an accreditation program that meets the EPA Model.

Applicants shall send the information requested below to the Regional Asbestos Coordinator at the EPA Regional Office (see addresses in Section II) located in the Region where the training course maintains its principal business office. The following information is required:

(1) The course sponsor's name, address and phone number.

(2) A list of any States that currently approve the training course.

(3) The course curriculum.

(4) A letter from the training course sponsor that clearly indicates how the course meets the Model Plan requirements for:

(a) Length of training in days.

(b) Amount and type of hands-on training.

(c) Examinations (length, format, and passing score).

(d) Topics covered in the course.

(5) A copy of all course materials (student manuals, instructor notebooks, handouts, etc.)

(6) A detailed statement about the development of the examination used in the course.

(7) Names and qualifications of course instructors. Instructors must have academic credentials and/or field experience in asbestos abatement.

(8) Description and an example of numbered certificates issued to students who attend the course and pass the examination.

For refresher courses in any of the disciplines, information required is as follows:

(1) Length of training.

(2) Topics covered in the course.

(3) A copy of all course materials.

(4) Names and qualifications of course instructors.

(5) Description and an example of certificates issued to students who complete the refresher course.

As noted above, the training course administrator must issue numbered certificates to students who successfully pass the training course's examination. The numbered certificate would indicate the name of the student and the course completed, the dates of the course and the examination, and a statement indicating that the student passed the examination.

The certificate also would include an expiration date for accreditation that is 1 year after the date on which the student completed the course and examination. Training course administrators who offer refresher training courses must also provide certificates with all of the above information (except testing information).

Accredited persons must have their initial and current accreditation certificates at the location where they are conducting work. Failure to have accreditation certificates at the job site could result in decertification.

EPA may revoke or suspend EPA approval if field site inspections indicate a training course is not conducting training that meets the requirements of the Model Plan. Training course sponsors shall permit EPA representatives to attend, evaluate, and monitor any training course without charge to EPA. EPA inspection staff may not give advance notice of their inspections.

EPA will publish a list of those training courses that are consistent with the Model Plan and are approved for purposes of TSCA Title II.

IV. PROVISIONS FOR INTERIM ACCREDITATION

TSCA Title II enables EPA to permit persons to be accredited on an interim basis if they have attended previous EPA-approved asbestos training and have passed (or pass) an asbestos examination. Only those persons who have taken training courses since January 1, 1985 will be considered under these interim accreditation provisions. EPA will determine whether the course and examination are equivalent to the training and examination requirements of the Model Plan. This accreditation is interim since the person shall be considered accredited for only 1 year after the date on which the State where the person is employed establishes an accreditation program at least as stringent as the EPA Model.

For purposes of the Model Plan, an equivalent training course is one that is essentially similar in length and content to the curriculum found in the Model Plan. In addition, an equivalent examination must be essentially similar to the requirements of the Model Plan.

Persons who have taken equivalent courses in their discipline, and can produce evidence that they have successfully completed the course by passing the examination, are accredited on an interim basis under TSCA Title II. They can conduct work under TSCA Title II in their discipline for 1 year after their State establishes an accreditation program in their discipline that is at least as stringent as the EPA Model. EPA will publish a list of training courses that are equivalent to the training requirements for each discipline in the Model Plan.

[52 FR 15876, Apr. 30, 1987]

APPENDIX D TO SUBPART E—TRANSPORT AND DISPOSAL OF ASBESTOS WASTE

For the purposes of this appendix, transport is defined as all activities from receipt of the containerized asbestos waste at the generation site until it has been unloaded at the disposal site. Current EPA regulations state that there must be no visible emissions to the outside air during waste transport. However, recognizing the potential hazards and subsequent liabilities associated with exposure, the following additional precautions are recommended.

Recordkeeping. Before accepting wastes, a transporter should determine if the waste is properly wetted and containerized. The transporter should then require a chain-of-custody form signed by the generator. A chain-of-custody form may include the name and address of the generator, the name and address of the pickup site, the estimated quantity of asbestos waste, types of containers used, and the destination of the waste. The chain-of-custody form should then be signed over to a disposal site operator to transfer responsibility for the asbestos waste. A copy of the form signed by the disposal site operator should be maintained by the transporter as evidence of receipt at the disposal site.

Waste handling. A transporter should ensure that the asbestos waste is properly contained in leak-tight containers with appropriate labels, and that the outside surfaces of the containers are not contaminated with asbestos debris adhering to the containers. If there is reason to believe that the condition of the asbestos waste may allow significant fiber release, the transporter should not accept the waste. Improper containerization of wastes is a violation of the NESHAPs regulation and should be reported to the appropriate EPA Regional Asbestos NESHAPs contact below:

Region I

Asbestos NESHAPs Contact, Air Management Division, USEPA, Region I, JFK Federal Building, Boston, MA 02203, (617) 223-3266.

Region II

Asbestos NESHAPs Contact, Air & Waste Management Division, USEPA, Region II, 26 Federal Plaza, New York, NY 10007, (212) 264-6770.

Region III

Asbestos NESHAPs Contact, Air Management Division, USEPA, Region III, 841 Chestnut Street, Philadelphia, PA 19107, (215) 597-9325.

Region IV

Asbestos NESHAPs Contact, Air, Pesticide & Toxic Management, USEPA, Region IV, 345 Courtland Street NE., Atlanta, GA 30365, (404) 347-4298.

Region V

Asbestos NESHAPs Contact, Air Management Division, USEPA, Region V, 230 S. Dearborn Street, Chicago, IL 60604, (312) 353-6793.

Region VI

Asbestos NESHAPs Contact, Air & W Management Division, USEPA, Region 1445 Ross Avenue, Dallas, TX 75202, (2 655-7229.

Region VII

Asbestos NESHAPs Contact, Air & Wa Management Division, USEPA, Region V 726 Minnesota Avenue, Kansas City, 66101, (913) 236-2896.

Region VIII

Asbestos NESHAPs Contact, Air & Was Management Division, USEPA, Region VI 999 18th Street, Suite 500, Denver, C 80202, (303) 293-1814.

Region IX

Asbestos NESHAPs Contact, Air Manag ment Division, USEPA, Region IX, 215 Fr mont Street, San Francisco, CA 94105, (41 974-7633.

Region X

Asbestos NESHAPs Contact, Air & Toxic Management Division, USEPA, Region X 1200 Sixth Avenue, Seattle, WA 98101, (20 442-2724.

Once the transporter is satisfied with the condition of the asbestos waste and agrees to handle it, the containers should be loaded into the transport vehicle in a careful manner to prevent breaking of the containers. Similarly, at the disposal site, the asbestos waste containers should be transferred carefully to avoid fiber release.

Waste transport. Although there are no regulatory specifications regarding the transport vehicle, it is recommended that vehicles used for transport of containerized asbestos waste have an enclosed carrying compartment or utilize a canvas covering sufficient to contain the transported waste, prevent damage to containers, and prevent fiber release. Transport of large quantities of asbestos waste is commonly conducted in a 20-cubic-yard "roll off" box, which should also be covered. Vehicles that use compactors to reduce waste volume should not be used because these will cause the waste containers to rupture. Vacuum trucks used to transport waste slurry must be inspected to ensure that water is not leaking from the truck.

Disposal involves the isolation of asbestos waste material in order to prevent fiber release to air or water. Landfilling is recommended as an environmentally sound isolation method because asbestos fibers are virtually immobile in soil. Other disposal techniques such as incineration or chemical treatment are not feasible due to the unique properties of asbestos. EPA has established asbestos disposal requirements for active and inactive disposal sites under NESHAPs (40 CFR Part 61, subpart M) and specifies general requirements for solid waste disposal under RCRA (40 CFR Part 257). Advance EPA notification of the intended disposal site is required by NESHAPs.

Selecting a disposal facility. An acceptable disposal facility for asbestos wastes must adhere to EPA's requirements of no visible emissions to the air during disposal, or minimizing emissions by covering the waste within 24 hours. The minimum required cover is 6 inches of nonasbestos material, normally soil, or a dust-suppressing chemical. In addition to these Federal requirements, many state or local government agencies require more stringent handling procedures. These agencies usually supply a list of "approved" or licensed asbestos disposal sites upon request. Solid waste control agencies are listed in local telephone directories under state, county, or city headings. A list of state solid waste agencies may be obtained by calling the RCRA hotline: 1-800-424-9346 (382-3000 in Washington, DC). Some landfill owners or operators place special requirements on asbestos waste, such as placing all bagged waste into 55-gallon metal drums. Therefore, asbestos removal contractors should contact the intended landfill before arriving with the waste.

Receiving asbestos waste. A landfill approved for receipt of asbestos waste should require notification by the waste hauler that the load contains asbestos. The landfill operator should inspect the loads to verify hat asbestos waste is properly contained in eak-tight containers and labeled appropri- tely. The appropriate EPA Regional Asbes- s NESHAPs Contact should be notified if e landfill operator believes that the asbes- s waste is in a condition that may cause gnificant fiber release during disposal. In tuations when the wastes are not properly ntainerized, the landfill operator should oroughly soak the asbestos with a water ray prior to unloading, rinse out the ck, and immediately cover the wastes th nonasbestos material prior to compact- g the waste in the landfill.

Waste deposition and covering. Recogniz- g the health dangers associated with as- stos exposure, the following procedures e recommended to augment current feder- requirements:

Designate a separate area for asbestos ste disposal. Provide a record for future downers that asbestos waste has been ied there and that it would be hazardous attempt to excavate that area. (Future ulations may require property deeds to ntify the location of any asbestos wastes warn against excavation.)

Prepare a separate trench to receive as- tos wastes. The size of the trench will end upon the quantity and frequency of asbestos waste delivered to the disposal site. The trenching technique allows application of soil cover without disturbing the asbestos waste containers. The trench should be ramped to allow the transport vehicle to back into it, and the trench should be as narrow as possible to reduce the amount of cover required. If possible, the trench should be aligned perpendicular to prevailing winds.

- Place the asbestos waste containers into the trench carefully to avoid breaking them. Be particularly careful with plastic bags because when they break under pressure asbestos particles can be emitted.
- Completely cover the containerized waste within 24 hours with a minimum of 6 inches of nonasbestos material. Improperly containerized waste is a violation of the NESHAPs and EPA should be notified.

However, if improperly containerized waste is received at the disposal site, it should be covered immediately after unloading. Only after the wastes, including properly containerized wastes, are completely covered, can the wastes be compacted or other heavy equipment run over it. During compacting, avoid exposing wastes to the air or tracking asbestos material away from the trench.

- For final closure of an area containing asbestos waste, cover with at least an additional 30 inches of compacted nonasbestos material to provide a 36-inch final cover. To control erosion of the final cover, it should be properly graded and vegetated. In areas of the United States where excessive soil erosion may occur or the frost line exceeds 3 feet, additional final cover is recommended. In desert areas where vegetation would be difficult to maintain, 3-6 inches of well graded crushed rock is recommended for placement on top of the final cover.

Controlling public access. Under the current NESHAPs regulation, EPA does not require that a landfill used for asbestos disposal use warning signs or fencing if it meets the requirement to cover asbestos wastes. However, under RCRA, EPA requires that access be controlled to prevent exposure of the public to potential health and safety hazards at the disposal site. Therefore, for liability protection of operators of landfills that handle asbestos, fencing and warning signs are recommended to control public access when natural barriers do not exist. Access to a landfill should be limited to one or two entrances with gates that can be locked when left unattended. Fencing should be installed around the perimeter of the disposal site in a manner adequate to deter access by the general public. Chain-link fencing, 6-ft high and topped with a barbed wire guard, should be used. More specific fencing requirements may be specified by local regulations. Warning signs should be displayed at all entrances and at intervals of 330 feet or less along the property line of the landfill or perimeter of the sections where asbestos waste is deposited. The sign should read as follows:

ASBESTOS WASTE DISPOSAL SITE

BREATHING ASBESTOS DUST MAY CAUSE LUNG DISEASE AND CANCER

Recordkeeping. For protection from liability, and considering possible future requirements for notification on disposal site deeds, a landfill owner should maintain documentation of the specific location and quantity of the buried asbestos wastes. In addition, the estimated depth of the waste below the surface should be recorded whenever a landfill section is closed. As mentioned previously, such information should be recorded in the land deed or other record along with a notice warning against excavation of the area.

[52 FR 41897, Oct. 30, 1987]

Subpart F—Friable Asbestos-Containing Materials in Schools

SOURCE: 47 FR 23369, May 27, 1982, unless otherwise noted.

§ 763.100 Scope and purpose.

(a) This rule requires local education agencies to identify friable asbestos-containing material in public and private schools by visually inspecting school buildings for friable materials, sampling such materials, and having samples analyzed by appropriate techniques referred to in the rule. In addition, the rule requires local education agencies to post a notice of the results of inspections and analyses. The rule requires local education agencies to provide warnings on the health effects of asbestos and instructions on methods to avoid or reduce exposure to school employees of any school with friable asbestos-containing material and to notify parent-teachers associations of the results of inspections. The rule also includes recordkeeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators for assistance in complying with this rule.

(b) The addresses and telepho numbers of the EPA Regional Asbe tos Coordinators are:

(1) EPA Region I

Asbestos Coordinator, Air and Hazardo
Materials Division, JFK Federal Bld
Boston, MA 02203 (617) 223-0585

(2) EPA Region II

Asbestos Coordinator, Room 1013, Woo
bridge Avenue, Edison, NJ 08837 (20
321-6668

(3) EPA Region III

Asbestos Coordinator, Curtis Buildin
Sixth and Walnut Streets, Philadelphi
PA 19106 (215) 597-9859, 597-8683

(4) EPA Region IV

Asbestos Coordinator, 345 Courtland Stre
Atlanta, GA 30365 (404) 881-3864

(5) EPA Region V

Asbestos Coordinator, 230 S. Dearborn S
Chicago, IL 60604 (312) 886-6003

(6) EPA Region VI

Asbestos Coordinator, First Internat'l Bld
1201 Elm Street, Dallas, TX 75270 (21
767-2734

(7) EPA Region VII

Asbestos Coordinator, 324 East 11 Stre
Room 1500, Kansas City, MO 64106 (81
374-6538

(8) EPA Region VIII

Asbestos Coordinator, 1860 Lincoln Stre
Denver, CO 80295 (303) 837-3926

(9) EPA Region IX

Asbestos Coordinator, 215 Fremont Stre
San Francisco, CA 94105 (415) 974-812

(10) EPA Region X

Asbestos Coordinator, 1200 Sixth Avenu
Seattle, WA 98101 (206) 442-2888

§ 763.103 Definitions.

For the purposes of this part:

(a) "Act" means the Toxic Sub stances Control Act (TSCA), 15 U.S.C 2601, *et seq.*

(b) "Asbestos" means the asbest form varieties of: chrysotile (serpen tine); crocidolite (riebeckite); amosi (cummingtonite-grunerite); antho phyllite; tremolite; and actinolite.

(c) "Asbestos-containing materia means any material which contai more than 1 percent asbestos by weight.

(d) "Friable material" means any material applied onto ceilings, walls, structural members, piping, ductwork, or any other part of the building structure which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

(e) "Local education agency" means:

(1) Any local education agency as defined in section 198(a)(10) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2854).

(2) The governing authority of any nonprofit elementary or secondary school, where the term "nonprofit" means owned and operated by one or more nonprofit corporations or associations no part of the net earnings of which inures, or may lawfully inure, to the benefit of any private shareholder or individual.

(f) "Sampling area" means any area, whether contiguous or not, within a school building which contains friable material that is homogeneous in texture and appearance.

(g) "School" means any public or private day or residential school that provides elementary or secondary education for grade 12 or under as determined under State law, or any school of any Agency of the United States.

(h) "School buildings" means:

(1) Structures used for the instruc- ion of school children, including class- ooms, laboratories, libraries, research acilities and administrative facilities.

(2) School eating facilities, and chool kitchens.

(3) Gymnasiums or other facilities sed for athletic or recreational activi- ies, or for courses in physical educa- ion.

(4) Dormitories or other living areas f residential schools.

(5) Maintenance, storage, or utility acilities essential to the operation of he facilities described in paragraphs)(1) through (4) of this section.

(i) "Use of asbestos" means the pres- ce of asbestos-containing material in hool buildings.

63.105 Inspection for friable material.

a) Local education agencies shall in- ect each school building which they se, own, or otherwise use as a school building, to locate all friable material.

(b) This inspection shall consist of looking for and touching all suspect materials, including surfaces behind suspended ceilings or other non-permanent structures which may be entered during normal building maintenance or repairs. For further information on inspection procedures, officials should consult Chapter 4 of "Asbestos-Containing Materials in School Buildings: A Guidance Document," Part 1 (EPA No. C00090). Particular attention should be paid to the recommendation regarding respirators. Copies of the document can be obtained by calling 800-424-9065 (in Washington, DC call 554-1404).

§ 763.107 Sampling friable material.

(a) If friable materials are found in a school building, local education agencies shall identify each distinct sampling area of friable materials within the school building, take at least three samples from locations distributed throughout the sampling area, and label each sample container with a sample identification number unique to the sampling location and building.

(b) Officials should consult "Asbestos-Containing Materials in School Buildings: A Guidance Document," Part 1, Chapter 5, for further information on sampling procedures. The requirement that three samples be taken in each sampling area supersedes the recommendation made in the Guidance Document to take one sample per 5000 square feet of friable material.

(c) Sampling locations should be randomly distributed within the sampling; the locations should not be selected simply for convenience or ease of reaching the sample, or because the sampler judges the location to be representative. Samples shall be taken using small sealable containers; samples shall penetrate the depth of the friable material to the substrate.

§ 763.109 Analyzing friable material.

Local education agencies shall have all samples of friable material analyzed for asbestos using Polarized Light Microscopy (PLM), supplemented where necessary by X-ray Diffraction, in accordance with "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Samples," which is found under appendix A of this subpart. Persons interested in analyzing bulk samples for asbestos can obtain copies of the document by calling 800-424-9065 (in Washington, DC, call 554-1404). A list of laboratories capable of conducting analyses of friable materials can be obtained by calling 800-334-8571, extension 6741. Officials should consult "Asbestos-Containing Materials in School Buildings: A Guidance Document," Part 1, Chapter 6, for further inform tion on analysis of friable materials.

§ 763.111 Warnings and notifications.

(a) Local education agencies sha post in the primary administrative an custodial offices and in the facult common rooms of each school unde their authority a completed copy c the following Notice to School Em ployees unless no friable asbestos-con taining material is present in th school. The notice shall remain poste indefinitely in any school which ha friable asbestos-containing material.

NOTICE TO SCHOOL EMPLOYEES

In accordance with EPA regulations, this school has been inspected for friable (easily crumbled) materials which contain asbestos. Friable asbestos-containing material may cause health problems.

Friable asbestos-containing material is present in

____
(Name of School)

A record of the inspection, a diagram of the location(s) of friable asbestos-containing materials, and a copy of relevant EPA regulations are available in

Building	Room

For further information, interested persons should call **800-424-9065 (554-1404** in the **Washington,** DC **area).**

Signed:

____
(Name)

____
(Title)

____
Date

PA Form 7730-3 (6-82)

LLING CODE 6560-50-C

(b) Local education agencies shall provide to all persons employed in school buildings under their authority which contain friable asbestos-containing materials a written notice of the location, by room or building area, of all friable asbestos-containing mate als in the school.

(c) The following information on terim procedures to reduce exposur "A Guide for Reducing Asbestos Exp sure," shall be provided to all custod or maintenance employees:

A GUIDE FOR REDUCING ASBESTOS EXPOSURE

PURPOSE

Your school building contains materials which contain asbestos and may release fibers into the air. Breathing asbestos fibers is dangerous. This fact sheet tells how to reduce exposure to asbestos fibers. Please read it carefully.

PROTECTING YOURSELF FROM ASBESTOS

Some of the friable building materials in your school contain asbestos. Friable asbestos-containing materials crumble easily and release fibers into the air. Breathing these fibers may cause cancer and other diseases. The more asbestos you breathe, the greater your chances are of getting disease. You can take precautions that will reduce or eliminate the risk of being exposed to asbestos.

Find out from your supervisor where these friable asbestos-containing materials are in your building. Do not touch or disturb them unless you have to. If you must handle an asbestos-containing material, first lightly spray it with water. (EPA recommends using water which contains wetting agents, if they are available.) Wet asbestos-containing materials will not release as many fibers.

Even if friable asbestos-containing materials are not disturbed, they may release asbestos fibers, which will fall slowly to the floor. If you are cleaning in areas which contain these materials, do not use a broom: it will stir the fibers into the air. Do not use a vacuum cleaner unless it is equipped with a High Efficiency Particulate Absolute filter. The fibers are so small they can pass through an ordinary vacuum cleaner and out into the room.

When cleaning in areas which contain friable asbestos-containing materials, use dampened mops and dustcloths. Dampened mops and dustcloths will hold the fibers much better than dry mops and dustcloths, and will reduce the number of fibers put back into the air. It is best to use mops with disposable heads and to throw away the mop head after use. Otherwise fibers will be released as the mop dries. Use either lightly dampened mops or cloths or a vacuum with a High Efficiency Particulate Absolute filter to clean areas where wet mopping cannot be used (such as carpeting or hardwood floors).

Clean tables and chairs in the area with damp cloths. Do not dust them with brushes or with dry cloths, and do not vacuum them.

After you use the mop heads and cloths, put them in a plastic bag while they are still wet. Dislodged materials should also be placed in plastic bags for disposal.

A LIST OF IMPORTANT POINTS TO REMEMBER

1. Do not handle or disturb friable asbestos containing materials unless necessary.

2. If you must handle asbestos-containing materials, wet them first.

3. If you must disturb asbestos (for example, to repair a light), see your supervisor before starting work. Then,

   a. Place a plastic dropcloth below the work area.

   b. Spray asbestos-containing material with water before you disturb it.

   c. Make sure that only those persons who are necessary for the job are in the area.

   d. Put all the asbestos you remove into a heavy plastic bag. Seal the bag and discard it.

   e. After the job, clean all the ladders and tools you used with a wet cloth.

   f. Roll up the dropcloth carefully and put it in a plastic bag. Discard the bag.

   g. Clean the floor below the work area with a wet mop.

   h. Put the mop head and the cloth used to clean the ladders in a plastic bag while they are still wet, seal the bag, and discard it.

4. If you must disturb or remove large sections of asbestos-containing material, see your supervisor before you begin. The National Institute for Occupational Safety and Health recommends that a respirator approved for toxic dusts be worn during such work.

You should make arrangements to turn off the school's ventilation system if you are disturbing or removing large sections of asbestos-containing material. The ventilation system should remain off until the work is completed and the area has been cleaned.

EPA Form 7730-2 (6-82)

(d) Local education agencies shall provide notice of the results of inspections and analyses in each school in which friable asbestos materials are found to the appropriate parent-teacher association of that school. If there is no parent-teacher association for the school, the local education agency shall notify directly the parents of its pupils.

§ 763.114 Recordkeeping.

(a) Local education agencies shall compile and maintain in the administrative office of each school under their authority a record which shall include:

(1) The name and address of the school.

(2) A list of all school buildings associated with the school, indicating whether each building has been inspected for friable materials in compliance with § 763.105, and which buildings contain friable materials.

(3) Copies of the Notice to School Employees, found in § 763.111(a).

(4) For each school building which contains friable materials:

(i) A blueprint, diagram, or written description of the building which identifies clearly the location(s) and approximate area(s) in square feet of each sampling area of such material(s), the locations at which samples were taken, and the identification number of each sample, and which shows or describes clearly whether each sampling area of friable material contains asbestos, including an estimate of its percent asbestos content as determined by calculating the average of the percent asbestos contents of all samples taken in that area.

(ii) A copy of all laboratory rep
and all correspondence with labo
ries concerning the analysis of sam
taken in accordance with § 763.107

(5) If the school contains friabl
bestos-containing materials, copie
the "Guide for Reducing Asbestos
posure" contained in § 763.111(b),
one copy of "Asbestos-Containing
terials in School Buildings: A G
ance Document," Parts 1 and 2 (
No. C00090), which can be obtaine
calling 800-424-9065.

(6) A statement that the requ
ments of the rule have been satis
signed by the person responsible
compliance with the rule and inc
ing the date and the person's na
and title.

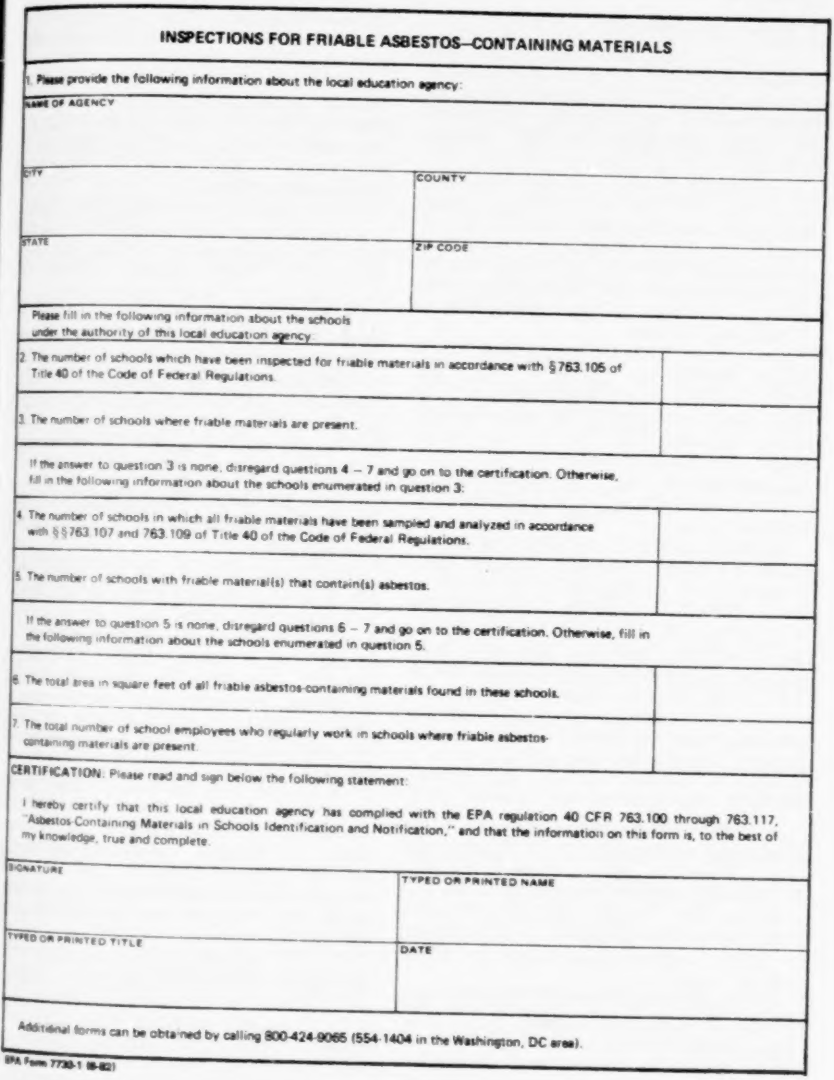
(b) Each local education age
shall retain in the administrat
office of the agency:

(1) A list of all schools under its
thority, indicating whether scho
were inspected in accordance w
§ 763.105, and which schools cont
friable materials.

(2) A record of the friable mater
in schools which were sampled a
analyzed in accordance with §§ 763.
and 763.109, indicating which mate
als contain asbestos.

(3) For each school which contai
friable asbestos-containing materia
the total area of such materials
square feet, and the total number
school employees who regularly wo
in the school.

(c) *Form.* Each local educati
agency shall complete and retain
the administrative office of the lo
education agency the following for
"Inspections for Friable Asbestos-Co
taining Materials."



INSPECTIONS FOR FRIABLE ASBESTOS–CONTAINING MATERIALS

1. Please provide the following information about the local education agency:

NAME OF AGENCY

CITY

COUNTY

STATE

ZIP CODE

Please fill in the following information about the schools under the authority of this local education agency:

2. The number of schools which have been inspected for friable materials in accordance with §763.105 of Title 40 of the Code of Federal Regulations.	
3. The number of schools where friable materials are present.	

If the answer to question 3 is none, disregard questions 4 – 7 and go on to the certification. Otherwise, fill in the following information about the schools enumerated in question 3:

4. The number of schools in which all friable materials have been sampled and analyzed in accordance with §§763.107 and 763.109 of Title 40 of the Code of Federal Regulations.	
5. The number of schools with friable material(s) that contain(s) asbestos.	

If the answer to question 5 is none, disregard questions 6 – 7 and go on to the certification. Otherwise, fill in the following information about the schools enumerated in question 5.

6. The total area in square feet of all friable asbestos-containing materials found in these schools.	
7. The total number of school employees who regularly work in schools where friable asbestos-containing materials are present.	

CERTIFICATION: Please read and sign below the following statement:

I hereby certify that this local education agency has complied with the EPA regulation 40 CFR 763.100 through 763.117, "Asbestos-Containing Materials in Schools Identification and Notification," and that the information on this form is, to the best of my knowledge, true and complete.

SIGNATURE

TYPED OR PRINTED NAME

TYPED OR PRINTED TITLE

DATE

Additional forms can be obtained by calling 800-424-9065 (554-1404 in the Washington, DC area).

EPA Form 7730-1 (8-82)

§ 763.115 Compliance.

(a) Local education agencies shall comply with all parts of this regulation by May 27, 1983. Local education agencies that have already conducted detection activities should consult § 763.117 *Exemptions.*

(b) Actions undertaken by municipal or State officials on behalf of local education agencies as a part of a municipal or State school asbestos program shall constitute compliance with this regulation to the extent that such actions conform to the requirements of this regulation.

(c) Section 15(1) of TSCA (15 U.S.C. 2614) makes it unlawful for any person to fail or refuse to comply with any rule promulgated or order issued under section 6 of TSCA (15 U.S.C. 2605). Thus, failure to comply with any aspect of this rule constitutes a violation as defined by section 15(1) of TSCA.

(d) Section 16(a) of TSCA (15 U.S.C. 2615) provides that any person who violates any provision of section 15 shall be liable to the United States for civil penalties. If a violation is knowing or willful, criminal penalties may also be assessed. Under section 17 of TSCA (15 U.S.C. 2616), the Agency may take injunctive action to restrain persons from violating a rule promulgated under section 6 of TSCA.

§ 763.117 Exemptions.

(a) *Schools that were inspected, sampled, and analyzed prior to this rule.* (1) Schools are exempt from §§ 763.105, 763.107, and 763.109, if, prior to the effective date of this rule, local education agencies, or municipal or State agencies, acting on their behalf, have:

(i) Visually inspected all areas of the school for friable materials.

(ii) Sampled each type of friable material found in the school, as distinguished by different appearance or texture.

(iii) Had the sample(s) analyzed using Polarized Light Microscopy supplemented by X-ray Diffraction where necessary, or by Electron Microscopy.

This exemption for previous sampling activity does not apply to school buildings where it was determined that a friable material does not contain bestos based on fewer than three s ples of the material.

(2) If a school was found to cont friable asbestos-containing materi then §§ 763.111, 763.114 and 763.1 the recordkeeping and notification quirements, shall apply to the lo education agencies.

(3) If a school was found to conta *no* friable asbestos-containing mate als, the school also is exempt fro §§ 763.111, 763.114, and 763.115, t recordkeeping and notification quirements, provided the school tains a copy of all laboratory repor and all correspondence with laborat ries concerning the analyses of sa ples taken and maintains in the scho record the following certifying stat ment, signed and dated by the perso responsible for compliance with th rule: "I hereby certify that this schoo to the best of my knowledge, does no contain friable asbestos-containin materials."

(b) *Schools which can document tha no friable asbestos-containing building materials were used in construction, modification, or renovation.* A school is exempt from §§ 763.105, 763.107, and 763.109, the inspection, sampling, and analysis requirements, and §§ 763.111, 763.114, and 763.115, the recordkeeping and notification requirements, if:

(1) The school record contains documentation showing that, at the time of construction, modification, or renovation, no friable asbestos/containing building materials were used. To qualify for this exemption, documentation must clearly show that the friable materials used did not contain asbestos.

(2) The school record contains the following certifying statement, signed and dated by the person responsible for compliance with the rule: "I hereby certify that this school, to the best of my knowledge, does not contain friable asbestos-containing materials."

(c) *Other exemptions.* (1) Sections 763.105, 763.107, and 763.109 shall not apply to a school in which the record contains a signed statement certifying that any friable materials in the school shall be treated for purposes of this rule as asbestos-containing. In this case, the record shall also include information on the location of these materials.

(2) No provision of this subpart applies to any school if:

(i) The local education agency has conducted abatement programs that result in the elimination of all friable asbestos materials from the school either by removal or encapsulation of the materials.

(ii) No part of the school building was built before January 1979.

§ 763.119 References.

(a) *General.* The following reference contains detailed information on sampling and analysis of friable materials and provides a background on which this Part is based. Microfiche copies may be obtained from the TSCA Public Docket Office (TS-793), Rm. NE-G004, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(1) USEPA. 1979. "Asbestos-Containing Materials in School Buildings: A Guidance Document" Part 1 (EPA No. C00090), OPTS Docket 61004.

(2) [Reserved]

(b) [Reserved]

[53 FR 12525, Apr. 15, 1988]

APPENDIX A TO SUBPART F—INTERIM METHOD OF THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES

SECTION 1. POLARIZED LIGHT MICROSCOPY

1.1 Principle and Applicability

Bulk samples of building materials taken for asbestos identification are first examined for homogeneity and preliminary fiber identification at low magnification. Positive identification of suspect fibers is made by analysis of subsamples with the polarized light microscope.

The principles of optical mineralogy are well established.[1] [2] A light microscope equipped with two polarizing filters is used to observe specific optical characteristics of a sample. The use of plane polarized light allows the determination of refractive indices along specific crystallographic axes. Morphology and color are also observed. A retardation plate is placed in the polarized light path for determination of the sign of elongation using orthoscopic illumination. Orientation of the two filters such that their vibration planes are perpendicular (crossed polars) allows observation of the birefringence and extinction characteristics of anisotropic particles.

Quantitative analysis involves the use of point counting. Point counting is a standard technique in petrography for determining the relative areas occupied by separate minerals in thin sections of rock. Background information on the use of point counting[2] and the interpretation of point count data[3] is available.

This method is applicable to all bulk samples of friable insulation materials submitted for identification and quantitation of asbestos components.

1.2 Range

The point counting method may be used for analysis of samples containing from 0 to 100 percent asbestos. The upper detection limit is 100 percent. The lower detection limit is less than 1 percent.

1.3 Interferences

Fibrous organic and inorganic constituents of bulk samples may interfere with the identification and quantitation of the asbestos mineral content. Spray-on binder materials may coat fibers and affect color or obscure optical characteristics to the extent of masking fiber identity. Fine particles of other materials may also adhere to fibers to an extent sufficient to cause confusion in identification. Procedures that may be used for the removal of interferences are presented in Section 1.7.2.2.

1.4 Precision and Accuracy

Adequate data for measuring the accuracy and precision of the method for samples with various matrices are not currently available. Data obtained for samples containing a single asbestos type in a simple matrix are available in the EPA report *Bulk Sample Analysis for Asbestos Content: Evaluation of the Tentative Method.*[4]

1.5 Apparatus

1.5.1 *Sample Analysis*

A low-power binocular microscope, preferably stereoscopic, is used to examine the bulk insulation sample as received.

- *Microscope:* binocular, 10-45X (approximate).
- *Light Source:* incandescent or fluorescent.
- *Forceps, Dissecting Needles, and Probes*
- *Glassine Paper or Clean Glass Plate*

Compound microscope requirements: A polarized light microscope complete with polarizer, analyzer, port for wave retardation plate, 360° graduated rotating stage, substage condenser, lamp, and lamp iris.

- *Polarized Light Microscope:* described above.

- *Objective Lenses:* 10X, 20X, and 40X or near equivalent.
- *Dispersion Staining Objective Lens* (optional)
- *Ocular Lens:* 10X minimum.
- *Eyepiece Reticle:* cross hair or 25 point Chalkley Point Array.
- *Compensator Plate:* 550 millimicron retardation.

1.5.2 *Sample Preparation*

Sample preparation apparatus requirements will depend upon the type of insulation sample under consideration. Various physical and/or chemical means may be employed for an adequate sample assessment.

- *Ventilated Hood* or negative pressure glove box.
- *Microscope Slides*
- *Coverslips*
- *Mortar and Pestle:* agate or porcelain. (optional)
- *Wylie Mill* (optional)
- *Beakers and Assorted Glassware* (optional)
- *Certrifuge* (optional)
- *Filtration apparatus* (optional)
- *Low temperature asher* (optional)

1.6 Reagents

1.6.1 *Sample Preparation*

- *Distilled Water* (optional)
- *Dilute CH_3COOH:* ACS reagent grade (optional)
- *Dilute HCl:* ACS reagent grade (optional)
- *Sodium metaphosphate* $(NaPO_3)_6$ (optional)

1.6.2 *Analytical Reagents*

Refractive Index Liquids: 1.490–1.570, 1.590–1.720 in increments of 0.002 or 0.004.

- *Refractive Index Liquids for Dispersion Staining:* high-dispersion series, 1.550, 1.605, 1.630 (optional).
- *UICC Asbestos Reference Sample Set:* Available from: UICC MRC Pneumoconiosis Unit, Llandough Hospital, Penarth, Glamorgan CF6 1XW, UK, and commercial distributors.
- *Tremolite-asbestos* (source to be determined)
- *Actinolite-asbestos* (source to be determined)

1.7 Procedures

NOTE: Exposure to airborne asbestos fibers is a health hazard. Bulk samples submitted for analysis are usually friable and may release fibers during handling or matrix reduction steps. All sample and slide preparations should be carried out in a ventilated hood or glove box with continuous airflow (negative pressure). Handling of samples without these precautions may result in exposure of the analyst and contaminat samples by airborne fibers.

1.7.1 *Sampling*

Samples for analysis of asbestos co shall be taken in the manner prescrib Reference 5 and information on desi sampling and analysis programs ma found in Reference 6. If there are any tions about the representative nature o sample, another sample should be requ before proceeding with the analysis.

1.7.2 *Analysis*

1.7.2.1 *Gross Examination*

Bulk samples of building materials t for the identification and quantitation o bestos are first examined for homoger at low magnification with the aid of a eomicroscope. The core sample may be amined in its container or carefully remo from the container onto a glassine tran paper or clean glass plate. If possible, is made of the top and bottom orientat When discrete strata are identified, eac treated as a separate material so that fi are first identified and quantified in t layer only, and then the results for e layer are combined to yield an estimate asbestos content for the whole sample.

1.7.2.2 *Sample Preparation*

Bulk materials submitted for asbes analysis involve a wide variety of mat materials. Representative subsamples m not be readily obtainable by simple me in heterogeneous materials, and vario steps may be required to alleviate the dif culties encountered. In most cases, howev the best preparation is made by using fo ceps to sample at several places from t bulk material. Forcep samples are immers in a refractive index liquid on a microscop slide, teased apart, covered with a cov glass, and observed with the polarized ligh microscope.

Alternatively, attempts may be made t homogenize the sample or eliminate inte ferences before further characterizatio The selection of appropriate procedures i dependent upon the samples encountere and personal preference. The following ar presented as possible sample preparatio steps.

A mortar and pestle can sometimes be used in the size reduction of soft or loosely bound materials though this may cause matting of some samples. Such samples may be reduced in a Wylie mill. Apparatus should be clean and extreme care exercised to avoid cross-contamination of samples. Periodic checks of the particle sizes should be made during the grinding operation so as to preserve any fiber bundles present in a identifiable form. These procedures are not recommended for samples that contain amphibole minerals or vermiculite. Grinding of amphiboles may result in the separation of fiber bundles or the production of cleavage fragments with aspect ratios greater than 3:1. Grinding of vermiculite may also produce fragments with aspect ratios greater than 3:1.

Acid treatment may occasionally be required to eliminate interferences. Calcium carbonate, gypsum, and bassanite (plaster) are frequently present in sprayed or trowelled insulations. These materials may be removed by treatment with warm dilute acetic acid. Warm dilute hydrochloric acid may also be used to remove the above materials. If acid treatment is required, wash the sample at least twice with distilled water, being careful not to lose the particulates during decanting steps. Centrifugation or filtration of the suspension will prevent significant fiber loss. The pore size of the filter should be 0.45 micron or less. Caution: prolonged acid contact with the sample may alter the optical characteristics of chrysotile fibers and should be avoided.

Coatings and binding materials adhering to fiber surfaces may also be removed by treatment with sodium metaphosphate.[7] Add 10 mL of 10g/L sodium metaphosphate solution to a small (0.1 to 0.5 mL) sample of bulk material in a 15-mL glass centrifuge tube. For approximately 15 seconds each, stir the mixture on a vortex mixer, place in an ultrasonic bath and then shake by hand. Repeat the series. Collect the dispersed solids by centrifugation at 1000 rpm for 5 minutes. Wash the sample three times by suspending in 10 mL distilled water and recentrifuging. After washing, resuspend the pellet in 5 mL distilled water, place a drop of the suspension on a microscope slide, and dry the slide at 110° C.

In samples with a large portion of cellulosic or other organic fibers, it may be useful to ash part of the sample and view the residue. Ashing should be performed in a low temperature asher. Ashing may also be performed in a muffle furnace at temperatures of 500° C or lower. Temperatures of 550° C or higher will cause dehydroxylation of the asbestos minerals, resulting in changes of the refractive index and other key parameters. If a muffle furnace is to be used, the furnace thermostat should be checked and calibrated to ensure that samples will not be heated at temperatures greater than 550° C.

Ashing and acid treatment of samples should not be used as standard procedures. In order to monitor possible changes in fiber characteristics, the material should be viewed microscopically before and after any sample preparation procedure. Use of these procedures on samples to be used for quantitation requires a correction for percent weight loss.

1.7.2.3 *Fiber Identification*

Positive identification of asbestos requires the determination of the following optical properties.

- Morphology
- Color and pleochroism
- Refractive indices
- Birefringence
- Extinction characteristics
- Sign of elongation

Table 1-1 lists the above properties for commercial asbestos fibers. Figure 1-1 presents a flow diagram of the examination procedure. Natural variations in the conditions under which deposits of asbestiform minerals are formed will occasionally produce exceptions to the published values and differences from the UICC standards. The sign of elongation is determined by use of the compensator plate and crossed polars. Refractive indices may be determined by the Becke line test. Alternatively, dispersion staining may be used. Inexperienced operators may find that the dispersion staining technique is more easily learned, and should consult Reference 9 for guidance. Central stop dispersion staining colors are presented in Table 1-2. Available high-dispersion (HD) liquids should be used.

TABLE 1-1—OPTICAL PROPERTIES OF ASBESTOC FIBERS

Mineral	Morphology, color[a]	Refractive indices[b]		Birefringence	Extinction	Sign of elonation
		α	γ			
Chrysotile (asbestiform serpentine).	Wavy fibers. Fiber bundles have splayed ends and "kinks". Aspect ratio typically >10:1. Colorless[3], nonpleochroic.	1.493–1.560	1.517–1.562[f] (normally 1.556).	.008	‖to fiber length..	+ (length slow)
Amosite (asbestiform grunerite).	Straight, rigid fibers. Aspect ratio typically >10:1. Colorless to brown, nonpleochroic or weakly so. Opaque inclusions may be present.	1.635–1.696	1.655–1.729[f] (normally 1.696–1.710.	.020–.033	‖to fiber length..	+ (length slow)

TABLE 1-1—OPTICAL PROPERTIES OF ASBESTOC FIBERS—Continued

Mineral	Morphology, color[a]	Refractive indices[b]		Birefringence	Extinction	Sign of elongation
		α	γ			
Crocidolite (asbestiform Riebeckite).	Straight, rigid fibers. Thick fibers and bundles common, blue to purple-blue in color. Pleochroic. Birefringence is generally masked by blue color.	1.654–1.701	1.668–1.717[b,e] (normally close to 1.700).	.014–.016	‖to fiber length	– (length fast
Anthophyllite-asbestos.	Straight fibers and acicular cleavage fragments.[d] Some composite fibers. Aspect ratio <10:1. Colorless to light brown.	1.596–1.652	1.615–1.676[f].	.019–.024	‖to fiber length	+ (length slow)
Tremolite-actinolite-asbestos.	Normally present as acicular or prismatic cleavage fragments.[d] Single crystals predominate, aspect ratio <10:1. Colorless to pale green.	1.599–1.668	1.622–1.688[f].	.023–.020	Oblique extinction, 10–20° for fragments. Composite fibers show ‖ extinction.	+ (length slow)

[a] From reference 5; colors cited are seen by observation with plane polarized light.
[b] From references 5 and 8.
[c] Fibers subjected to heating may be brownish.
[d] Fibers defined as having aspect ratio >3:1.
[e] ⊥ to fiber length.
[f] ‖To fiber length.

examination of sample at low magnification. dispersed sample in 1.550 RI liquid. (If using dispersion staining, mount in 1.550 HD.) View at 100X with both plane polarized light and crossed polars. More than one fiber type may be present.

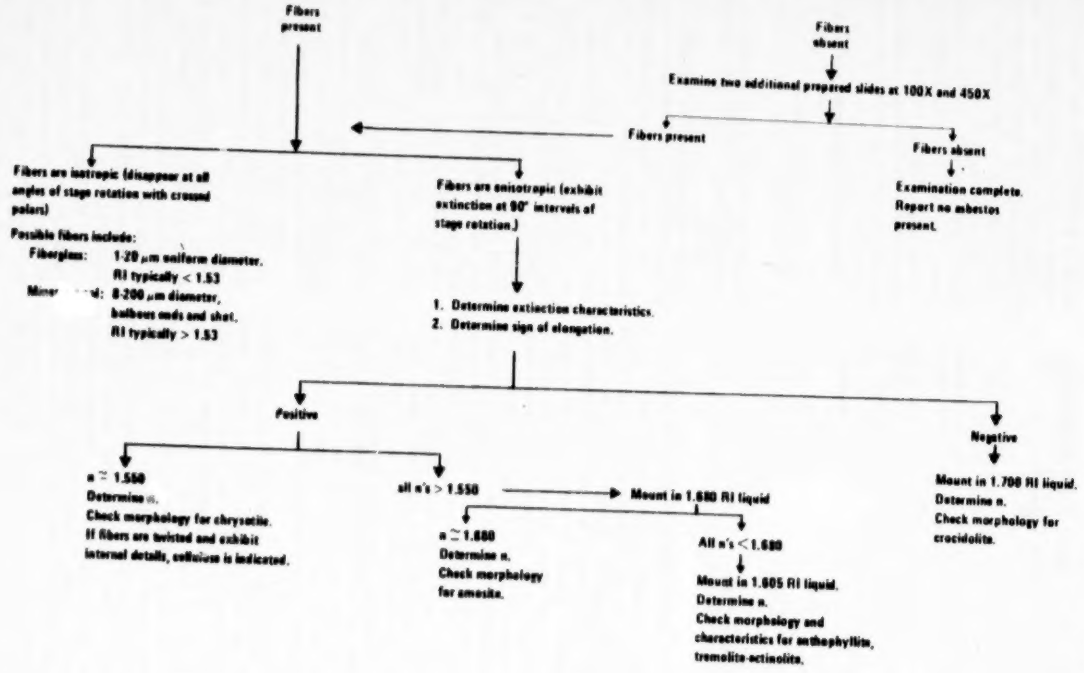

Fibers present
Fibers absent
Examine two additional prepared slides at 100X and 450X
Fibers present
Fibers absent
Examination complete. Report no asbestos present.
Fibers are isotropic (disappear at all angles of stage rotation with crossed polars)
Possible fibers include:
Fiberglass: 1-20 µm uniform diameter. RI typically < 1.53
Miner[illegible]: 8-200 µm diameter, bulbous ends and shot. RI typically > 1.53
Fibers are anisotropic (exhibit extinction at 90° intervals of stage rotation.)
1. Determine extinction characteristics.
2. Determine sign of elongation.
Positive
Negative
n ≃ 1.550
Determine n.
Check morphology for chrysotile.
If fibers are twisted and exhibit internal details, cellulose is indicated.
all n's > 1.550
Mount in 1.680 RI liquid
n ≃ 1.680
Determine n.
Check morphology for amosite.
All n's < 1.680
Mount in 1.605 RI liquid.
Determine n.
Check morphology and characteristics for anthophyllite, tremolite-actinolite.
Mount in 1.700 RI liquid.
Determine n.
Check morphology for crocidolite.

Figure 1-1. Flow chart for analysis of bulk samples by polarized light microscopy.

TABLE 1-2—CENTRAL STOP DISPERSION STAINING COLORS[a]

Mineral	RI Liquid	$\eta\perp$	$\eta\parallel$
Chrysotile	1.550$^{\mathrm{HD}}$	Blue	Blue-magenta
Amosite	1.680	Blue-magenta to pale blue.	Golden-yellow
	1.550$^{\mathrm{HD}}$	Yellow to white	Yellow to white
Crocidolite[b]	1.700	Red magenta	Blue-magenta
	1.550$^{\mathrm{HD}}$	Yellow to white	Yellow to white
Anthophyllite	1.605$^{\mathrm{HD}}$	Blue	Gold to gold-magenta
Tremolite	1.605$^{\mathrm{HD}}$[c]	Pale blue	Gold
Actinolite	1.605$^{\mathrm{HD}}$	Gold-magenta to blue.	Gold
	1.630$^{\mathrm{HD}}$[c]	Magenta	Golden-yellow

[a] From reference 9.

[b] Blue absorption color.

[c] Oblique extinction view.

1.7.2.4 *Quantitation of Asbestos Content*

Asbestos quantitation is performed by a point-counting procedure or an equivalent estimation method. An ocular reticle (cross-hair or point array) is used to visually superimpose a point or points on the microscope field of view. Record the number of points positioned directly above each kind of particle or fiber of interest. Score only points directly over asbestos fibers or nonasbestos matrix material. Do not score empty points for the closest particle. If an asbestos fiber and a matrix particle overlap so that a point is superimposed on their visual intersection, a point is scored for both categories. Point counting provides a determination of the area percent asbestos. Reliable conversion of area percent to percent of dry weight is not currently feasible unless the specific gravities and relative volumes of the materials are known.

For the purpose of this method, "asbestos fibers" are defined as having an aspect ratio greater than 3:1 and being positively identified as one of the minerals in Table 1-1.

A total of 400 points superimposed on either asbestos fibers or nonasbestos matrix material must be counted over at least eight different preparations of representative subsamples. Take eight forcep samples and mount each separately with the appropriate refractive index liquid. The preparation should not be heavily loaded. The sample should be uniformly dispersed to avoid overlapping particles and allow 25-50 percent empty area within the fields of view. Count 50 nonempty points on each preparation, using either

- A cross-hair reticle and mechanical stage; or
- A reticle with 25 points (Chalkley Point Array) and counting at least 2 randomly selected fields.

For samples with mixtures of isotropic and anisotropic materials present, viewing the sample with slightly uncrossed polars or the addition of the compensator plate to the polarized light path will allow simultaneous discrimination of both particle types. Quantitation should be performed at 100X or at the lowest magnification of the polarized light microscope that can effectively distinguish the sample components. Confirmation of the quantitation result by a second analyst on some percentage of analyzed samples should be used as standard quality control procedure.

The percent asbestos is calculated as follows:

% asbestos=(a/n) 100%

where

a=number of asbestos counts,
n=number of nonempty points counted (400).

If a=0, report "No asbestos detected." If 0<a<3, report "<1% asbestos".

The value reported should be rounded to the nearest percent.

1.8 References

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SECTION 2, X-RAY POWDER DIFFRACTION

2.1 Principle and Applicability

The principle of X-ray powder diffraction (XRD) analysis is well established.[1 2] Any solid, crystalline material will diffract an impingent beam of parallel, monochromatic X-rays whenever Bragg's Law,

$\lambda = 2d \sin \theta$,

s satisfied for a particular set of planes in he crystal lattice, where

λ = the X-ray wavelength, Å;
l = the interplanar spacing of the set of reflecting lattice planes, Å; and
= the angle of incidence between the X-ray beam and the reflecting lattice planes.

y appropriate orientation of a sample relave to the incident X-ray beam, a diffracon pattern can be generated that, in most ases, will be uniquely characteristic of both he chemical composition and structure of he crystalline phases present.

Unlike optical methods of analysis, howev, XRD cannot determine crystal morpholy. Therefore, in asbestos analysis, XRD es not distinguish between fibrous and onfibrous forms of the serpentine and amibole minerals (Table 2-1). However, hen used in conjunction with optical ethods such as polarized light microscopy LM), XRD techniques can provide a relile analytical method for the identifican and characterization of asbestiform nerals in bulk materials.

For *qualitative analysis* by XRD methods, samples are initially scanned over limited diagnostic peak regions for the serpentine (~7.4 Å) and amphibole (8.2-8.5 Å) minerals (Table 2-2). Standard slow-scanning methods for bulk sample analysis may be used for materials shown by PLM to contain significant amounts of asbestos (>5-10 percent). Detection of minor or trace amounts of asbestos may require special sample preparation and step-scanning analysis. All samples that exhibit diffraction peaks in the diagnostic regions for asbestiform minerals are submitted to a full (5°-60° 2θ; 1° 2θ/min) qualitative XRD scan, and their diffraction patterns are compared with standard reference powder diffraction patterns[3] to verify initial peak assignments and to identify possible matrix interferences when subsequent quantitative analysis will be performed.

TABLE 2-1—THE ASBESTOS MINERALS AND THEIR NONASBESTIFORM ANALOGS

Asbestiform	Nonasbestiform
SERPENTINE	
Chrysotile	Antigorite, lizardite
AMPHIBOLE	
Anthophyllite asbestos	Anthophyllite
Cummingtonite-grunerite asbestos ("Amosite")	Cummingtonite-grunerite
Crocidolite	Riebeckite
Tremolite asbestos	Tremolite
Actinolite asbestos	Actinolite

TABLE 2-2—PRINCIPAL LATTICE SPACINGS OF ASBESTIFORM MINERALS[a]

Minerals	Principal d-spacings (Å) and relative intensities			JCPDS Powder diffraction file[3] number
sotile	7.37_{100}	3.65_{70}	4.57_{50}	21-543[b]
	7.36_{100}	3.66_{80}	2.45_{65}	25-645
	7.10_{100}	2.33_{80}	3.55_{70}	22-1162 (theoretical)
osite"	8.33_{100}	3.06_{70}	2.756_{70}	17-745 (nonfibrous)
	8.22_{100}	3.060_{85}	3.25_{70}	27-1170 (UICC)
ophyllite	3.05_{100}	3.24_{60}	8.26_{55}	9-455
	3.06_{100}	8.33_{70}	3.23_{50}	16-401 (synthetic)
ophyllite	2.72_{100}	2.54_{100}	3.480_{80}	25-157
dolite	8.35_{100}	3.10_{55}	2.720_{35}	27-1415 (UICC)
olite	8.38_{100}	3.12_{100}	2.705_{90}	13-437[b]
	2.706_{100}	3.14_{95}	8.43_{40}	20-1310[b] (synthetic)
	3.13_{100}	2.706_{60}	8.44_{40}	23-666 (synthetic mixture with richterite)

s information is intended as a guide, only. Complete powder diffraction data, including mineral type and source, should ferred to, to ensure comparability of sample and reference materials where possible. Additional precision XRD data on te, crocidolite, tremolite, and chrysotile are available from the U.S. Bureaus of Mines.[4]

rosity questionable.

curate *quantitative analysis* of asbestos lk samples by XRD is critically dependon particle size distribution, crystallite preferred orientation and matrix abtion effects, and comparability of standreference and sample materials. The most intense diffraction peak that has been shown to be free from interference by prior qualitative XRD analysis is selected for quantitation of each asbestiform mineral. A "thin-layer" method of analysis[5 6] is recommended in which, subsequent to comminution of the bulk material to ~10 μm by suitable cryogenic milling techniques, an accurately known amount of the sample is deposited on a silver membrane filter. The mass of asbestiform material is determined by measuring the integrated area of the selected diffraction peak using a step-scanning mode, correcting for matrix absorption effects, and comparing with suitable calibration standards. Alternative "thick-layer" or bulk methods,[7,8] may be used for *semiquantitative analysis.*

This XRD method is applicable as a confirmatory method for identification and quantitation of asbestos in bulk material samples that have undergone prior analysis by PLM or other optical methods.

2.2 Range and Sensitivity

The range of the method has not been determined.

The sensitivity of the method has not been determined. It will be variable and dependent upon many factors, including matrix effects (absoprtion and interferences), diagnostic reflections selected, and their relative intensities.

2.3 Limitations

2.3.1 *Interferences*

Since the fibrous and nonfibrous forms of the serpentine and amphibole minerals (Table 2-1) are indistinguishable by XRD techniques unless special sample preparation techniques and instrumentation are used,[9] the presence of nonasbestiform serpentines and amphiboles in a sample will pose severe interference problems in the identification and quantitative analysis of their asbestiform analogs.

The use of XRD for identification and quantitation of asbestiform minerals in bulk samples may also be limited by the presence of other interfering materials in the sample. For naturally occurring materials the commonly associated asbestos-related mineral interferences can usually be anticipated. However, for fabricated materials the nature of the interferences may vary greatly (Table 2-3) and present more serious problems in identification and quantitation.[10] Potential interferences are summarized in Table 2-4 and include the following:

- *Chlorite* has major peaks at 7.19 Å and 3.58 Å That interfere with both the primary (7.36 Å) and secondary (3.66 Å) peaks for chrysotile. Resolution of the primary peak to give good quantitative results may be possible when a step-scanning mode of operation is employed.
- *Halloysite* has a peak at 3.63 Å that interferes with the secondary (3.66 Å) peak for chrysotile.
- *Kaolinite* has a major peak at 7.15 Å that may interfere with the primary peak of chrysotile at 7.36 Å when present at concentrations of >10 percent. However, the secondary chrysotile peak at 3.66 Å may be used for quantitation.
- *Gypsum* has a major peak at 7.5 Å that overlaps the 7.36 Å peak of chrysotile when present as a major sample constituent. This may be removed by careful washing with distilled water, or be heating to 300° C to convert gypsum to plaster of paris.
- *Cellulose* has a broad peak that partially overlaps the secondary (3.66 Å) chrysotile peak.[9]
- Overlap of major diagnostic peaks of the amphibole asbestos minerals, amosite, anthophyllite, crocidolite, and tremolite, at approximately 8.3 Å and 3.1 Å causes mutual interference when these minerals occur in the presence of one another. In some instances, adquate resolution may be attained by using step-scanning methods and/or by decreasing the collimator slit width at the X-ray port.

TABLE 2-3—COMMON CONSTITUENTS IN INSULATION AND WALL MATERIALS

A. Insulation materials
  Chrysotile
  "Amosite"
  Crocidolite
  *Rock wool
  *Slag wool
  *Fiber glass
  Gypsum ($CaSO_4 \cdot 2H_2O$)
  Vermiculite (micas)
  *Perlite
  Clays (kaolin)
  *Wood pulp
  *Paper fibers (talc, clay, carbonate fillers
  Calcium silicates (synthetic)
  Opaques (chromite, magnetite inclusions in serpentine)
  Hematite (inclusions in "amosite")
  Magnesite
  *Diatomaceous earth
B. Spray finishes or paints
  Bassanite
  Carbonate minerals (calcite, dolomite, vaterite)
  Talc
  Tremolite
  Anthophyllite
  Serpentine (including chrysotile)
  Amosite
  Crocidolite
  *Mineral wool
  *Rock wool
  *Slag wool
  *Fiber glass
  Clays (kaolin)
  Micas
  Chlorite
  Gypsum ($CaSO_4 \cdot 2H_2O$)
  Quartz

•Organic binders and thickeners
Hyrdomagnesite
Wollastonite
Opaques (chromite, magnetite inclusions in serpentine)
Hematite (inclusions in "amosite")
•Amorphous materials—contribute only to overall scattered radiation and increased background radiation.

TABLE 2-4—INTERFERENCES IN XRD ANALYSIS ASBESTIFORM MINERALS

Asbestiform mineral	Primary diagnostic peaks (approximate d-spacings, in Å)	Interference
Serpentine		
Chrysotile	7.4	Nonasbestiform serpentines (antigorite, lizardite)
		Chlorite
		Kaolinite
		Gypsum
	3.7	Chlorite
		Halloysite
		Cellulose
mphibole		
"Amosite" Anthophyllite Crocidolite Tremolite	3.1	Nonasbestiform amphiboles (cummingtonite-grunerite, anthophyllite, riebeckite, tremolite)
		Mutual interferences
		Carbonates
		Talc
	8.3	Mutual interferences

Carbonates may also interfere with quantitative analysis of the amphibole asbestos minerals, amosite, anthophyllite, crocidolite, and tremolite. Calcium carbonate ($CaCO_3$) has a peak at 3.035 Å that overlaps major amphibole peaks at approximately 3.1 Å when present in concentrations of >5 percent. Removal of carbonates with a dilute acid wash is possible; however, if present, chrysotile may be partially dissolved by this treatment.[11]

A major *talc* peak at 3.12 Å interferes with he primary tremolite peak at this same position and with secondary peaks of crocidolite (3.10 Å), amosite (3.06 Å), and nthophyllite (3.05 Å). In the presence of alc, the major diagnostic peak at approximately 8.3 Å should be used for quantitation of these asbestiform minerals.

The problem of intraspecies and matrix erferences is further aggravated by the iability of the silicate mineral powder fraction patterns themselves, which often kes definitive identification of the asbes minerals by comparison with standard erence diffraction patterns difficult. This iability results from alterations in the crystal lattice associated with differences in isomorphous substitution and degree of crystallinity. This is especially true for the amphiboles. These minerals exhibit a wide variety of very similar chemical compositions, with the result being that their diffraction patterns are chracterized by having major (110) reflections of the monoclinic amphiboles and (210) reflections of the orthorhombic anthophyllite separated by less than 0.2 Å.[12]

2.3.2 *Matrix Effects*

If a copper X-ray source is used, the presence of iron at high concentrations in a sample will result in significant X-ray fluorescence, leading to loss of peak intensity along with increased background intensity and an overall decrease in sensitivity. This situation may be corrected by choosing an X-ray source other than copper; however, this is often accompanied both by loss of intensity and by decreased resolution of closely spaced reflections. Alternatively, use of a diffracted beam monochromator will reduce background fluorescent raditation, enabling weaker diffraction peaks to be detected.

X-ray absorption by the sample matrix will result in overall attenuation of the diffracted beam and may seriously interfere with quantitative analysis. Absorption effects may be minimized by using sufficiently "thin" samples for analysis.[5 13 14] However, unless absorption effects are known to be the same for both samples and standards, appropriate corrections should be made by referencing diagnostic peak areas to an internal standard[7 8] or filter substrate (Ag) peak.[5 6]

2.3.3 *Particle Size Dependence*

Because the intensity of diffracted X-radiation is particle-size dependent, it is essential for accurate quantitative analysis that both sample and standard reference materials have similar particle size distributions. The optimum particle size range for quantitative analysis of asbestos by XRD has been reported to be 1 to 10 μm.[15] Comparability of sample and standard reference material particle size distributions should be verified by optical microscopy (or another suitable method) prior to analysis.

2.3.4 *Preferred Orientation Effects*

Preferred orientation of asbestiform minerals during sample preparation often poses a serious problem in quantitative analysis by XRD. A number of techniques have been developed for reducing preferred orientation effects in "thick layer" samples.[7 8 15] However, for "thin" samples on membrane filters, the preferred orientation effects seem to be both reproducible and favorable to enhancement of the principal diagnostic reflections of asbestos minerals, actually increasing the overall sensitivity of the method.[13, 14] (Further investigation into preferred orientation effects in both thin layer and bulk samples is required.)

2.3.5 *Lack of Suitably Characterized Standard Materials*

The problem of obtaining and characterizing suitable reference materials for asbestos analysis is clearly recognized. NIOSH has recently directed a major research effort toward the preparation and characterization of analytical reference materials, including asbestos standards;[16, 17] however, these are not available in large quantities for routine analysis.

In addition, the problem of ensuring the comparability of standard reference and sample materials, particularly regarding crystallite size, particle size distribution, and degree of crystallinity, has yet to be adequately addressed. For example, Langer et al.[18] have observed that in insulating matrices, chrysotile tends to break open into bundles more frequently than amphiboles. This results in a line-broadening effect with a resultant decrease in sensitivity. Unless this effect is the same for both standard and sample materials, the amount of chrysotile in the sample will be underestimated by XRD analysis. To minimize this problem, it is recommended that standardized matrix reduction procedures be used for both sample and standard materials.

2.4 Precision and Accuracy

Precision of the method has not been determined.

Accuracy of the method has not been determined.

2.5 Apparatus

2.5.1 *Sample Preparation*

Sample preparation apparatus requirements will depend upon the sample type under consideration and the kind of XRD analysis to be performed.

- *Mortar and Pestle:* Agate or porcelain.
- *Razor Blades*
- *Sample Mill:* SPEX, Inc., freezer mill or equivalent.
- *Bulk Sample Holders*
- *Silver Membrane Filters:* 25-mm diameter, 0.45-μm pore size. Selas Corp. of America, Flotronics Div., 1957 Pioneer Road, Huntington Valley, PA 19006.
- *Microscope Slides*
- *Vacuum Filtration Apparatus:* Gelman No. 1107 or equivalent, and side-arm vacuum flask.
- *Microbalance*
- *Ultrasonic Bath or Probe:* Model W140, Ultrasonics, Inc., operated at a power density of approximately 0.1 W/mL, or equivalent.
- *Volumetric Flasks:* 1-L volume.
- *Assorted Pipettes*
- *Pipette Bulb*
- *Nonserrated Forceps*
- *Polyethylene Wash Bottle*
- *Pyrex Beakers:* 50-mL volume.
- *Desiccator*
- *Filter Storage Cassettes*
- *Magnetic Stirring Plate and Bars*
- *Porcelain Crucibles*
- *Muffle Furnace or Low Temperature Asher*

2.5.2 *Sample Analysis*

Sample analysis requirements include an X-ray diffraction unit, equipped with:

- *Constant Potential Generator; Voltage and mA Stabilizers*
- *Automated Diffractometer with Step-Scanning Mode*
- *Copper Target X-Ray Tube:* High intensity, fine focus, preferably.
- *X-Ray Pulse Height Selector*
- *X-Ray Detector* (with high voltage power supply): Scintillation or proportional counter.
- *Focusing Graphite Crystal Monochromator;* or *Nickel Filter* (if copper source is used, and iron fluorescence is not a serious problem).
- *Data Output Accessories:*
  - *Strip Chart Recorder*
  - *Decade Scaler/Timer*
  - *Digital Printer*
- *Sample Spinner* (optional).
- *Instrument Calibration Reference Specimen:* α-quartz reference crystal (Arkansas quartz standard, #180-147-00, Philips Electronics Instruments, Inc., 85 McKee Drive, Mahwah, NJ 07430) or equivalent.

2.6 Reagents

2.6.1 *Standard Reference Materials*

The reference materials listed below are intended to serve as a guide. Every attempt should be made to acquire pure reference materials that are comparable to sample materials being analyzed.

- *Chrysotile:* UICC Canadian, or NIEHS Plastibest. (UICC reference materials available from: UICC, MRC Pneumoconiosis Unit, Llandough Hospital, Penarth, Glamorgan, CF61XW, UK).
- *Crocidolite:* UICC
- *Amosite:* UICC
- *Anthophyllite:* UICC
- *Tremolite Asbestos:* Wards Natural Science Establishment, Rochester, N.Y.; Cyprus Research Standard, Cyprus Research, 2435 Military Ave., Los Angeles, CA 90064 (washed with dilute HCl to remove small

amount of calcite impurity); India tremolite, Rajasthan State, India.

- *Actinolite Asbestos*

2.6.2 *Adhesive*

Tape, petroleum jelly, etc. (for attaching silver membrane filters to sample holders).

2.6.3 *Surfactant*

1 percent aerosol OT aqueous solution or equivalent.

2.6.4 *Isopropanol*

ACS Reagent Grade.

2.7 Procedure

2.7.1 *Sampling*

Samples for analysis of asbestos content shall be collected as specified in EPA Guidance Document #C0090, *Asbestos-Containing Materials in School Buildings.*[10]

2.7.2 *Analysis*

All samples must be analyzed initially for asbestos content by PLM. XRD should be used as an auxiliary method when a second, independent analysis is requested.

NOTE: Asbestos is a toxic substance. All handling of dry materials should be performed in an operating fume hood.

2.7.2.1 *Sample Preparation*

The method of sample preparation required for XRD analysis will depend on: (1) The condition of the sample received (sample size, homogeneity, particle size distribution, and overall composition as determined by PLM); and (2) the type of XRD analysis to be performed (qualitative, quantitative, thin layer or bulk).

Bulk materials are usually received as inhomogeneous mixtures of complex composition with very wide particle size distributions. Preparation of a homogeneous, representative sample from asbestos-containing materials is particularly difficult because the fibrous nature of the asbestos minerals inhibits mechanical mixing and stirring, and because milling procedures may cause adverse lattice alterations.

A discussion of specific matrix reduction procedures is given below. Complete methods of sample preparation are detailed in Sections 2.7.2.2 and 2.7.2.3.

NOTE: All samples should be examined microscopically before and after each matrix reduction step to monitor changes in sample particle size, composition, and crystallinity, and to ensure sample representativeness and homogeneity for analysis.

2.7.2.1.1 *Milling*—Mechanical milling of asbestos materials has been shown to decrease fiber crystallinity, with a resultant decrease in diffraction intensity of the specimen; the degree of lattice alteration is related to the duration and type of milling process.[18, 22] Therefore, all milling times should be kept to a minimum.

For *qualitative analysis,* particle size is not usually of critical importance and initial characterization of the material with a minimum of matrix reduction is often desirable to document the composition of the sample as received. Bulk samples of very large particle size (>2-3 mm) should be comminuted to ~100 μm. A mortar and pestle can sometimes be used in size reduction of soft or loosely bound materials though this may cause matting of some samples. Such samples may be reduced by cutting with a razor blade in a mortar, or by grinding in a suitable mill (e.g., a microhammer mill or equivalent). When using a mortar for grinding or cutting, the sample should be moistened with ethanol, or some other suitable wetting agent, to minimize exposures.

For accurate, reproducible *quantitative analysis,* the particle size of both sample and standard materials should be reduced to ~10 μm (see Section 2.3.3). Dry ball milling at liquid nitrogen temperatures (e.g., Spex Freezer Mill, or equivalent) for a maximum time of 10 min. is recommended to obtain satisfactory particle size distributions while protecting the integrity of the crystal lattice.[5] Bulk samples of very large particle size may require grinding in two stages for full matrix reduction to <10 μm.[8, 16]

Final particle size distributions should always be verified by optical microscopy or another suitable method.

2.7.2.1.2 *Low temperature ashing*—For materials shown by PLM to contain large amounts of gypsum, cellulosic, or other organic materials, it may be desirable to ash the samples prior to analysis to reduce background radiation or matrix interference. Since chrysotile undergoes dehydroxylation at temperatures between 550° C and and 650° C, with subsequent transformation to forsterite,[23, 24] ashing temperatures should be kept below 500° C. Use of a low temperature asher is recommended. In all cases, calibration of the oven is essential to ensure that a maximum ashing temperature of 500° C is not exceeded.

2.7.2.1.3 *Acid leaching*—Because of the interference caused by gypsum and some carbonates in the detection of asbestiform minerals by XRD (see Section 2.3.1), it may be necessary to remove these interferents by a simple acid leaching procedure prior to analysis (see Section 1.7.2.2).

2.7.2.2 *Qualitative Analysis*

2.7.2.2.1 *Initial screening of bulk material*—Qualitative analysis should be performed on a representative, homogeneous portion of the sample with a minimum of sample treatment.

1. Grind and mix the sample with a mortar and pestle (or equivalent method, see Section 2.7.2.1.1.) to a final particle size sufficiently small (≃100 μm) to allow adequate packing into the sample holder.

2. Pack the sample into a standard bulk sample holder. Care should be taken to ensure that a representative portion of the milled sample is selected for analysis. Paticular care should be taken to avoid possible size segregation of the sample. (Note: Use of a back-packing method[25] of bulk sample preparation may reduce preferred orientation effects.)

3. Mount the sample on the diffractometer and scan over the diagnostic peak regions for the serpentine (~67.4 Å) and amphibole (8.2-8.5 Å) minerals (see Table 2-2). The X-ray diffraction equipment should be optimized for intensity. A slow scanning speed of 1° 2θ/min is recommended for adequate resolution. Use of a sample spinner is recommended.

4. Submit all samples that exhibit diffraction peaks in the diagnostic regions for asbestiform minerals to a full qualitative XRD scan (5°-60° 2θ; 1°2θ/min) to verify initial peak assignments and to identify potential matrix interferences when subsequent quantitative analysis is to be perform.

5. Compare the sample XRD pattern with standard reference powder diffraction patterns (i.e., JCPDS powder diffraction data[3] or those of other well-characterized reference materials). Principal lattice spacings of asbestiform minerals are given in Table 2-2; common constituents of bulk insulation and wall materials are listed in Table 2-3.

2.7.2.2.2 *Detection of minor or trace constituents*—Routine screening of bulk materials by XRD may fail to detect small concentrations (<5 percent) of asbestos. The limits of detection will, in general, be improved if matrix absorption effects are minimized, and if the sample particle size is reduced to the optimal 1 to 10 μm range, provided that the crystal lattice is not degraded in the milling process. Therefore, in those instances where confirmation of the presence of an asbestiform mineral at very low levels is required, or where a negative result from initial screening of the bulk material by XRD (see Section 2.7.2.2.1) is in conflict with previous PLM results, it may be desirable to prepare the sample as described for quantitative analysis (see Section 2.7.2.3) and step-scan over appropriate 2θ ranges of selected diagnostic peaks (Table 2-2). Accurate transfer of the sample to the silver membrane filter is not necessary unless subsequent quantitative analysis is to be performed.

2.7.2.3 *Quantitative Analysis*

The proposed method for quantitation of asbestos in bulk samples is a modification of the NIOSH-recommended thin-layer method for chrysotile in air.[5] A thick-layer or bulk method involving pelletizing the sample may be used for semiquantitative analysis;[7,8] however, this method requires the addition of an internal standard, use of a specially fabricated sample press, and relatively large amounts of standard reference materials. Additional research is required to evaluate the comparability of thin- and thick-layer methods for quantitative asbestos analysis.

For quantitative analysis by thin-layer methods, the following procedure is recommended:

1. Mill and size all or a substantial representative portion of the sample as outlined in Section 2.7.2.1.1.

2. Dry at 100° C for 2 hr; cool in a desiccator.

3. Weigh accurately to the nearest 0.01 mg.

4. Samples shown by PLM to contain large amounts of cellulosic or other organic materials, gypsum, or carbonates, should be submitted to appropriate matrix reduction procedures described in Sections 2.7.2.1.2 and 2.7.2.1.3. After ashing and/or acid treatment, repeat the drying and weighing procedures described above, and determine the percent weight loss; L.

5. Quantitatively transfer an accurately weighed amount (50-100 mg) of the sample to a 1-L volumetric flask with approximately 200 mL isopropanol to which 3 to 4 drops of surfactant have been added.

6. Ultrasonicate for 10 min at a power density of approximately 0.1 W/mL, to disperse the sample material.

7. Dilute to volume with isopropanol.

8. Place flask on a magnetic stirring plate. Stir.

9. Place a silver membrane filter on the filtration apparatus, apply a vacuum, and attach the reservoir. Release the vacuum and add several milliliters of isopropanol to the reservoir. Vigorously hand shake the asbestos suspension and immediately withdraw an aliquot from the center of the suspension so that total sample weight, W_T, on the filter will be approximately 1 mg. Do not adjust the volume in the pipet by expelling part of the suspension; if more than the desired aliquot is withdrawn, discard the aliquot and resume the procedure with a clean pipet. Transfer the aliquot to the reservoir. Filter rapidly under vacuum. Do not wash the reservoir walls. Leave the filter apparatus under vacuum until dry. Remove the reservoir, release the vacuum, and remove the filter with forceps. (Note: Water-soluble matrix interferences such as gypsum may be removed at this time by careful washing of the filtrate with distilled water. Extreme care should be taken not to disturb the sample.)

10. Attach the filter to a flat holder with a suitable adhesive and place on the diffractometer. Use of a sample spinner is recommended.

11. For each asbestos mineral to be quantitated select a reflection (or reflections) that has been shown to be free from interferences by prior PLM or qualitative XRD analysis and that can be used unambiguously as an index of the amount of material present in the sample (see Table 2-2).

12. Analyze the selected diagnostic reflection(s) by step scanning in increments of 0.02° 2θ for an appropriate fixed time and integrating the counts. (A fixed count scan may be used alternatively; however, the method chosen should be used consistently for all samples and standards.) An appropriate scanning interval should be selected for each peak, and background corrections made. For a fixed time scan, measure the background on each side of the peak for one-half the peak-scanning time. The net intensity, I_a, is the difference between the peak integrated count and the total background count.

13. Determine the net count, I_{Ag}, of the filter 2.36 Å silver peak following the procedure in step 12. Remove the filter from the holder, reverse it, and reattach it to the holder. Determine the net count for the unattenuated silver peak, I°_{Ag}. Scan times may be *less* for measurement of silver peaks than for sample peaks; however, they should be *constant* throughout the analysis.

14. Normalize all raw, net intensities (to correct for instrument instabilities) by referencing them to an external standard (e.g., the 3.34 Å peak of an α-quartz reference crystal). After each unknown is scanned, determine the net count, I_r, of the reference specimen following the procedure in step 12. Determine the normalized intensities by dividing the peak intensities by I_r:

$$\hat{I}_a = \frac{I_a}{I^\circ_r}, \quad \hat{I}_{Ag} = \frac{I_{Ag}}{I^\circ_r}, \quad \text{and} \quad \hat{I}^\circ_{Ag} = \frac{I^\circ_{Ag}}{I^\circ_r}$$

2.8 Calibration

2.8.1 *Preparation of Calibration Standards*

1. Mill and size standard asbestos materials according to the procedure outlined in Section 2.7.2.1.1. *Equivalent, standardized matrix reduction and sizing techniques should be used for both standard and sample materials.*

2. Dry at 100° C for 2 hr; cool in a desiccator.

3. Prepare two suspensions of each standard in isopropanol by weighing approximately 10 and 50 mg of the dry material to the nearest 0.01 mg. Quantitatively transfer each to a 1-L volumetric flask with approximately 200 mL isopropanol to which a few drops of surfactant have been added.

4. Ultrasonicate for 10 min at a power density of approximately 0.1 W/mL, to disperse the asbestos material.

5. Dilute to volume with isopropanol.

6. Place the flask on a magnetic stirring plate. Stir.

7. Prepare, in triplicate, a series of at least five standard filters to cover the desired analytical range, using appropriate aliquots of the 10 and 50 mg/L suspensions and the following procedure.

Mount a silver membrane filter on the filtration apparatus. Place a few milliliters of isopropanol in the reservoir. Vigorously hand shake the asbestos suspension and immediately withdraw an aliquot from the center of the suspension. Do not adjust the volume in the pipet by expelling part of the suspension; if more than the desired aliquot is withdrawn, discard the aliquot and resume the procedure with a clean pipet. Transfer the aliquot to the reservoir. Keep the tip of the pipet near the surface of the isopropanol. Filter rapidly under vacuum. Do not wash the sides of the reservoir. Leave the vacuum on for a time sufficient to dry the filter. Release the vacuum and remove the filter with forceps.

2.8.2 *Analysis of Calibration Standards*

1. Mount each filter on a flat holder. Perform step scans on selected diagnostic reflections of the standards and reference specimen using the procedure outlined in Section 2.7.2.3, step 12, and the same conditions as those used for the samples.

2. Determine the normalized intensity for each peak measured, $\hat{I}_{std}$, as outlined in Section 2.7.2.3, step 14.

2.9 Calculations

For each asbestos reference material, calculate the exact weight deposited on each standard filter from the concentrations of the standard suspensions and aliquot volumes. Record the weight, w, of each standard. Prepare a calibration curve by regressing $\hat{I}2_{std}$ on w. Poor reproducibility (±15 percent RSD) at any given level indicates problems in the sample preparation technique, and a need for new standards. The data should fit a straight line equation.

Determine the slope, m, of the calibration curve in counts/microgram. The intercept, b, of the line with the $\hat{I}_{std}$ axis should be approximately zero. A large negative intercept indicates an error in determining the background. This may arise from incorrectly measuring the baseline or from interference by another phase at the angle of background measurement. A large positive intercept indicates an error in determining the baseline or that an impurity is included in the measured peak.

Using the normalized intensity, $\hat{I}_{Ag}$, for the attenuated silver peak of a sample, and the corresponding normalized intensity from the unattenuated silver peak, $\hat{I}^{\circ}_{Ag}$, of the sample filter, calculate the transmittance, T, for each sample as follows:[26,27]

$$T = \frac{\hat{I}_{Ag}}{\hat{I}^{\circ}_{Ag}}$$

Determine the correction factor, f(T), for each sample according to the formula:

$$f(T) = \frac{-R(\ln T)}{1-T^{R}}$$

where

$$R = \frac{\sin \theta_{Ag}}{\sin \theta_{a}}$$

θ_{Ag}=angular position of the measured silver peak (from Bragg's Law), and

θ_{a}=angular position of the diagnostic asbestos peak.

Calculate the weight, W_a, in micrograms, of the asbestos material analyzed for in each sample, using the appropriate calibration data and absorption corrections:

$$W_a = \frac{\hat{I}_a f(t) - b}{m}$$

Calculate the percent composition, P_a, of each asbestos mineral analyzed for in the parent material, from the total sample weight, W_T, on the filter:

$$P_a = \frac{W_a(1-.01L)}{W_T} \times 100$$

where

P_a=percent asbestos mineral in parent material;

W_a=mass of asbestos mineral on filter, in μg;

W_T=total sample weight on filter, in μg;

L=percent weight loss of parent material on ashing and/or acid treatment (see Section 2.7.2.3).

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[47 FR 23369, May 27, 1982; 47 FR 38535, Sept. 1, 1982]

Subpart G—Asbestos Abatement Projects

SOURCE: 52 FR 5623, Feb. 25, 1987, unless otherwise noted.

§ 763.120 Scope.

(a) This part establishes requirements which must be followed during asbestos abatement projects by employers of State and local government employees not covered by the Asbestos Standard of the Occupational Safety and Health Administration (OSHA), 29 CFR 1926.58, an Asbestos Standard adopted by a State as part of a State plan approved by OSHA under section 18 of the Occupational Safety and Health Act, or a State asbestos regulation which EPA has determined to be comparable to or more stringent than this part. The rule covers those employees who take part in asbestos abatement work.

(b) [Reserved]

§ 763.121 Regulatory requirements.

(a) [Reserved]

(b) *Definitions.* "Action level" means an airborne concentration of asbestos of 0.1 fiber per cubic centimeter (f/cc) of air calculated as an 8-hour time-weighted average.

"Administrator" means the Administrator, U.S. Environmental Protection Agency, or designee.

"Asbestos" means the asbestiform varieties of chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite—grunerite); tremolite; anthophyllite, and actinolite.

"Asbestos abatement project" means any activity involving the removal, enclosure, or encapsulation of friable asbestos material.

"Authorized person" means any person authorized by the employer and required by work duties to be present in regulated areas.

"Clean room" means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

"Competent person" means one who is capable of identifying existing asbestos hazards in the workplace and who has the authority to take prompt corrective measures to eliminate them. The duties of the competent person include at least the following: Establishing the negative-pressure enclosure, ensuring its integrity, and controlling entry to and exit from the enclosure; supervising any employee exposure monitoring required by this subpart, ensuring that all employees working within such an enclosure wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in this subpart; and ensuring that engineering controls in use are in proper operating condition and are functioning properly.

"Decontamination area" means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment contaminated with asbestos.

"Demolition" means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

"Emergency project" means a project involving the removal, enclosure, or encapsulation of friable asbestos-containing material that was not planned but results from a sudden unexpected event.

"Employee exposure" means that exposure to airborne asbestos would occur if the employee were not using respiratory protective equipment.

"Employer" means the public department, agency, or entity which hires an employee. The term includes, but is not limited to, any State, County, City, or other local governmental entity which operates or administers schools, a department of health or human services, a library, a police department, a fire department, or similar public service agencies or offices.

"Equipment room (change room)" means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

"Fiber" means a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

"Friable asbestos material" means any material containing more than 1 percent asbestos by weight which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

"High-efficiency particulate air (HEPA) filter" means a filter capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometer in diameter or larger.

"Regulated area" means an area established by the employer to demarcate areas where airborne concentrations of asbestos exceed or can reasonably be expected to exceed the permissible exposure limit. The regulated area may take the form of: (1) A temporary enclosure, as required by paragraph (e)(6) of this section, or (2) an area demarcated in any manner that minimizes the number of employees exposed to asbestos.

"Removal" means the taking out or stripping of asbestos or materials containing asbestos.

"Renovation" means the modifying of any existing structure, or portion thereof, where exposure to airborne asbestos may result.

"Repair" means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates where asbestos is present.

(c) *Permissible exposure limit (PEL).* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.2 fiber per cubic centimeter of air as an 8-hour time-weighted average (TWA), as determined by the method prescribed in Appendix A of this section, or by an equivalent method.

(d) *Communication among employers.* On multi-employer worksites, an employer performing asbestos work requiring the establishment of a regulated area shall inform other employers (as defined by this subpart and by 29 U.S.C. section 652(5)) on the site of the nature of the employer's work with asbestos and of the existence of and requirements pertaining to regulated areas.

(e) *Regulated areas*—(1) *General.* The employer shall establish a regulated area in work areas where airborne concentrations of asbestos exceed or can reasonably be expected to exceed the permissible exposure limit prescribed in paragraph (c) of this section.

(2) *Demarcation.* The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos in excess of the permissible exposure limit.

(3) *Access.* Access to regulated areas shall be limited to authorized persons.

(4) *Respirators.* All persons entering a regulated area shall be supplied with a respirator, selected in accordance with paragraph (h)(2) of this section.

(5) *Prohibited activities.* The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.

(6) *Requirements for asbestos removal, demolition, and renovation operations.* (i) Wherever feasible, the employer shall establish negative-pressure enclosures before commencing removal, demolition, and renovation operations.

(ii) The employer shall designate a competent person to perform or supervise the following duties:

(A) Set up the enclosure.

(B) Ensure the integrity of the enclosure.

(C) Control entry to and exit from the enclosure.

(D) Supervise all employee exposure monitoring required by this section.

(E) Ensure that employees working within the enclosure wear respirators and protective clothing as required by paragraphs (h) and (i) of this section.

(F) Ensure that employees are trained in the use of engineering controls, work practices, and personal protective equipment.

(G) Ensure that employees use the hygiene facilities and observe the decontamination procedures specified in paragraph (j) of this section.

(H) Ensure that engineering controls are functioning properly.

(iii)(A) In addition to the qualifications specified in paragraph (b) of this section, the competent person shall be trained in all aspects of asbestos abatement, the contents of this subpart, the identification of asbestos and its removal procedures, and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course, such as a course conducted by an EPA Asbestos Training Center, or an equivalent course.

(B) For small-scale, short-duration operations, such as pipe repair, valve replacement, installing electrical conduits, installing or removing drywall, roofing, and other general building maintenance or renovation, the employer is not required to comply with the requirements of paragraph (e)(6) of this section.

(f) *Exposure monitoring*—(1) *General.* (i) Each employer who has a workplace or work operation covered by this subpart shall perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed.

(ii) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA of each employee.

(iii) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing fullshift exposure for employees in each work area.

(2) *Initial monitoring.* (i) Each employer who has a workplace or work operation covered by this subpart, except as provided for in paragraphs (f)(2)(ii) and (iii) of this section, shall perform initial monitoring at the initiation of each asbestos job to determine accurately the airborne concentrations of asbestos to which employees may be exposed.

(ii) The employer may demonstrate that employee exposures are below the action level by means of objective data demonstrating that the product or material containing asbestos cannot release airborne fibers in concentrations exceeding the action level under those work conditions having the greatest potential for releasing asbestos.

(iii) Where the employer has monitored each asbestos job, and the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (f)(2)(i) of this section.

(3) *Periodic monitoring within regulated areas.* (i) The employer shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area.

(ii) When all employees within a regulated area are equipped with supplied-air respirators operated in the positive-pressure mode, the employer may dispense with the daily monitoring required by this paragraph.

(4) *Termination of monitoring.* If the periodic monitoring required by paragraph (f)(3)(i) of this section reveals that employee exposures, as indicated by statistically reliable measurements, are below the action level, the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

(5) *Method of monitoring.* (i) All samples taken to satisfy the monitoring requirements of paragraph (f) of this section shall be personal samples collected following the procedures specified in Appendix A of this section.

(ii) All samples taken to satisfy the monitoring requirements of paragraph (f) of this section shall be evaluated using the EPA/OSHA Reference Method (ORM) specified in Appendix A, or an equivalent counting method.

(iii) If an equivalent method to the ORM is used, the employer shall ensure that the method meets the fo lowing criteria:

(A) Replicate exposure data used t establish equivalency are collected i side-by-side field and laboratory comparisons.

(B) The comparison indicates tha 90 percent of the samples collected i the range 0.5 to 2.0 times the permiss ble limit have an accuracy range o plus or minus 25 percent of the ORM results with a 95 percent confidenc level as demonstrated by a statisticall valid protocol.

(C) The equivalent method is documented and the results of the comparison testing are maintained.

(iv) To satisfy the monitoring requirements of paragraph (f) of this section, employers shall rely on the results of monitoring analysis performed by laboratories that have instituted quality assurance programs that include the elements prescribed in Appendix A of this section.

(6) *Employee notification of monitoring results.* (i) The employer shall notify affected employees of the monitoring results that represent the employees' exposure as soon as possible following receipt of monitoring results.

(ii) The employer shall notify affected employees of the results of monitoring representing the employees' exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees.

(7) *Observation of monitoring.* (i) The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section

(ii) When observation of the monitoring of employee exposure to asbestos requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(g) *Methods of compliance*—(1) *Engineering controls and work practices.* (i) The employer shall use one or any combination of the following control methods to achieve compliance with the permissible exposure limit prescribed by paragraph (c) of this section:

(A) Local exhaust ventilation equipped with HEPA filter dust collection systems.

(B) General ventilation systems.

(C) Vacuum cleaners equipped with HEPA filters.

(D) Enclosure or isolation of processes producing asbestos dust.

(E) Use of wet methods, wetting agents, or removal encapsulants to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup.

(F) Prompt disposal of wastes contaminated with asbestos in leak-tight containers.

(G) Use of work practices or other engineering controls that the Administrator can show to be feasible.

(ii) Wherever the feasible engineering and work practice controls described in this paragraph are not sufficient to reduce employee exposure to or below the limit prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (h) of this section.

(2) *Prohibitions.* (i) High-speed abrasive disc saws that are not equipped with appropriate engineering controls shall not be used for work related to asbestos.

(ii) Compressed air shall not be used to remove asbestos materials containing asbestos unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

(iii) Materials containing asbestos shall not be applied by spray methods.

(3) *Employee rotation.* The employer shall not use employee rotation as a means of compliance with the exposure limit prescribed in paragraph (c) of this section.

(h) *Respiratory protection*—(1) *General.* The employer shall provide respirators, and ensure that they are used, where required by this section. Respirators shall be used in the following circumstances:

(i) During the interval necessary to install or implement feasible engineering and work practice controls.

(ii) In work operations such as maintenance and repair activities, or other activities for which engineering and work practice controls are not feasible.

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the exposure limit.

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are used, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1 in paragraph (h)(2)(iv) of this section, and shall ensure that the employee uses the respirator provided.

(ii) The employer shall select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

(iii) The employer shall provide a powered, air-purifying respirator in lieu of any negative-pressure respirator specified in Table 1 whenever:

(A) An employee chooses to use this type of respirator; and

(B) This respirator will provide adequate protection to the employee.

(iv) Table 1—Respiratory Protection for Asbestos Fibers.

TABLE 1—RESPIRATORY PROTECTION FOR ASBESTOS FIBERS

Airborne concentration of asbestos	Required respirator
Not in excess of 2 f/cc (10 × PEL).	1. Half-mask air-purifying respirator other than a disposable respirator equipped with high-efficiency filters.
Not in excess of 10 f/cc (50 × PEL).	1. Full facepiece air-purifying respirator equipped with high-efficiency filters.
Not in excess of 20 f/cc (100 × PEL).	1. Any powered air-purifying respirator equipped with high-efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc (1,000 × PEL).	1. Full facepiece supplied-air respirator operated in pressure demand mode.

TABLE 1—RESPIRATORY PROTECTION FOR ASBESTOS FIBERS—Continued

Airborne concentration of asbestos	Required respirator
Greater than 200 f/cc (>1,000×PEL) or unknown concentration.	1. Full facepiece supplied air respirator operated in pressure demand mode equipped with an auxilliary positive pressure selfcontained breathing apparatus.

NOTE: a. Respirators assigned for higher environmental concentrations may be used at lower concentrations.

b. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

(3) *Respirator program.* (i) Where respiratory protection is used, the employee shall institute a respirator program. This should include all information and guidance necessary for their proper selection, use, and care. Possible emergency uses of respirators should be anticipated and planned for.

(ii) The employer shall permit each employee who uses a filter respirator to change the filter elements whenever an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.

(iii) Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

(iv) No employee shall be assigned to tasks requiring the use of respirators if, based on his or her most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or of other employees will be impaired by the use of a respirator. Such employee shall be assigned to another job or given the opportunity to transfer to a different position, the duties of which he or she is able to perform, with the same employer, in the same geographical area, and with the same seniority, status, and rate of pay he or she had just prior to such transfer, if such a different position is available.

(4) *Respirator fit testing.* (i) The employer shall ensure that the respirato issued to the employee exhibits th least possible facepiece leakage an that the respirator is fitted properly.

(ii) Employers shall perform eithe quantitative or qualitative face fi tests at the time of initial fitting an at least every 6 months thereafter fo each employee wearing a negative pressure respirator. The qualitative fi tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, and shall be conducted in accordance with Appendix C of this section. The tests shall be used to select facepieces that provide the required protection as prescribed in Table 1.

(i) *Protective clothing*—(1) *General.* The employer shall provide and require the use of protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos that exceed the permissible exposure limit prescribed in paragraph (c) of this section.

(2) *Laundering.* (i) The employer shall ensure that laundering of contaminated clothing is done so as to prevent the release of airborne asbestos in excess of the exposure limit prescribed in paragraph (c) of this section.

(ii) Any employer who gives contaminated clothing to another person for laundering shall inform such person of the requirement in paragraph (i)(2)(i) of this section effectively to prevent the release of airborne asbestos in excess of the exposure limit prescribed in paragraph (c) of this section.

(3) *Contaminated clothing.* Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and be labeled in accordance with paragraph (k) of this section.

(4) *Protective clothing for removal, demolition, and renovation operations.* (i) The competent person shall periodically examine worksuits worn by employees for rips or tears that may occur during performance of work.

(ii) When rips or tears are detected while an employee is working within a negative-pressure enclosure, rips and tears shall be immediately mended, or the worksuit shall be immediately replaced.

(j) *Hygiene facilities and practices*—(1) *General.* (i)(A) The employer shall provide clean change areas for employees required to work in regulated areas or required by paragraph (i)(1) of this section to wear protective clothing.

(B) In lieu of the change area requirement specified in paragraph (j)(1)(i), the employer may permit employees engaged in small-scale, short-duration operations, as described in paragraph (e)(6) of this section, to clean their protective clothing with a portable HEPA-equipped vacuum before such employees leave the area where maintenance was performed.

(ii) The employer shall ensure that change areas are equipped with separate storage facilities for protective clothing and street clothing.

(iii) Whenever food or beverages are consumed at the worksite and employees are exposed to airborne concentrations of asbestos in excess of the permissible exposure limit, the employer shall provide lunch areas in which the airborne concentrations of asbestos are below the action level.

(2) *Requirements for removal, demolition, and renovation operations*—(i) *Decontamination area.* Except for small-scale, short-duration operations, as described in paragraph (e)(6) of this section, the employer shall establish a decontamination area that is adjacent and connected to the regulated area for the decontamination of employees contaminated with asbestos. The decontamination area shall consist of an equipment room, shower area, and clean room in series. The employer shall ensure that employees enter and exit the regulated area through the decontamination area.

(ii) *Clean room.* The clean room shall be equipped with a locker or appropriate storage container for each employee's use.

(iii) *Shower area.* Where feasible, shower facilities shall be provided. The showers shall be contiguous both to the equipment room and the clean change room, unless the employer can demonstrate that this location is not feasible. Where the employer can demonstrate that it is not feasible to locate the shower between the equipment room and the clean change room, the employer shall ensure that employees:

(A) Remove asbestos contamination from their worksuits using a HEPA vacuum before proceeding to a shower that is not contiguous to the work area; or

(B) Remove their contaminated worksuits, don clean worksuits, and proceed to a shower that is not contiguous to the work area.

(iv) *Equipment room.* The equipment room shall be supplied with impermeable, labeled bags and containers for the containment and disposal of contaminated protective clothing and equipment.

(v) *Decontamination area entry procedures.* (A) The employer shall ensure that employees:

(*1*) Enter the decontamination area through the clean room.

(*2*) Remove and deposit street clothing within a locker provided for their use.

(*3*) Put on protective clothing and respiratory protection before leaving the clean room.

(B) The employer shall ensure that employees pass through the equipment room before entering the enclosure.

(vi) *Decontamination area exit procedures.* (A) The employer shall ensure that employees remove all gross contamination and debris from their protective clothing before leaving the regulated area.

(B) The employer shall ensure that employees remove their protective clothing in the equipment room and deposit the clothing in labeled impermeable bags or containers.

(C) The employer shall ensure that employees do not remove their respirators in the equipment room.

(D) The employer shall ensure that employees shower prior to entering the clean room.

(E) The employer shall ensure that, after showering, employees enter the clean room before changing into street clothes.

(k) *Communication of hazards to employees*—(1) *Signs.* (i) Warning signs that demarcate the regulated area shall be provided and displayed at each location where airborne concentrations of asbestos may be in excess of the exposure limit prescribed in paragraph (c) of this section. Signs shall be posted at such a distance from such a location that an employee may read the signs and take necessary protective steps before entering the area marked by the signs.

(ii) The warning signs required by paragraph (k)(1)(i) of this section shall bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

(2) *Labels.* (i) Labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Where feasible, installed asbestos products shall contain a visible label.

(ii) Labels shall be printed in large, bold letters on a contrasting background.

(iii) Labels shall be used and shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(iv) [Reserved]

(v) Labels shall contain a warning statement against breathing airborne asbestos fibers.

(vi) The provisions for labels required by paragraph (k)(2)(i) of this section do not apply where:

(A) Asbestos fibers have been modified by a bonding agent, coating, binder, or other material, provided that the manufacturer can demonstrate that, during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the action level will be released or

(B) Asbestos is present in a product in concentrations less than 0.1 percent by weight.

(3) *Employee information and tra ing.* (i) The employer shall institut training program for all employees posed to airborne concentrations of bestos at or above the action level a shall ensure their participation in t program.

(ii) Training shall be provided pri to or at the time of initial assignme [unless the employee has receiv equivalent training within the pre ous 12 months] and at least annual thereafter.

(iii) The training program shall conducted in a manner that the e ployee is able to understand. The e ployer shall ensure that each emplo ee is informed of the following:

(A) Methods of recognizing asbesto

(B) The health effects associat with asbestos exposure.

(C) The relationship between smo ing and asbestos in producing lun cancer.

(D) The nature of operations tha could result in exposure to asbesto the importance of necessary protecti controls to minimize exposure inclu ing, as applicable, engineering co trols, work practices, respirator housekeeping procedures, hygiene fa cilities, protective clothing, decontam nation procedures, emergency proce dures, and waste disposal procedures and any necessary instruction in the use of these controls and procedures.

(E) The purpose, proper use, fitting instructions, and limitations of respirators.

(F) The appropriate work practices for performing the asbestos job; and

(G) Medical surveillance program requirements; and

(H) The content of this subpart, including appendices.

(4) *Access to training materials.* (i) The employer shall make readily available to all affected employees without cost all written materials relating to the employee training program, including a copy of this regulation.

(ii) The employer shall provide to the Administrator upon request, all information and training materials relating to the employee information and training program.

(l) *Housekeeping*—(1) *Vacuumin* Where vacuuming methods are selec ed, HEPA filtered vacuuming equipment must be used. The equipment shall be used and emptied in a manner that minimizes the reentry of asbestos into the workplace.

(2) *Waste disposal.* Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing consigned for disposal shall be collected and disposed of in sealed, labeled, impermeable bags or other closed, labeled, impermeable containers.

(m) *Medical surveillance*—(1) *General*—(i)—*Employees covered.* The employer shall institute a medical surveillance program for all employees engaged in work involving levels of asbestos at or above the action level for 30 or more days per year, or who are required by this section to wear negative-pressure respirators.

(ii) *Examination by a physician.* (A) The employer shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided at no cost to the employee and at a reasonable time and place.

(B) Persons other than such licensed physicians who administer the pulmonary function testing required by this section shall complete a training course in spirometry sponsored by an appropriate academic or professional institution.

(2) *Medical examinations and consultation*—(i) *Frequency.* The employer shall make available medical examinations and consultations to each employee covered under paragraph (m)(1)(i) of this section on the following schedules:

(A) Prior to assignment of the employee to an area where negative-pressure respirators are worn.

(B)(*1*) When the employee is assigned to an area where exposure to asbestos may be at or above the action level for 30 or more days per year, a medical examination must be given within 10 working days following the thirtieth day of exposure.

(*2*) No medical examination is required of any employee if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(C) At least annually thereafter.

(D) If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees at the frequencies specified by the physician.

(ii) *Content.* Medical examinations made available pursuant to paragraphs (m)(2)(i) (A), (B), and (C) of this section shall include:

(A) A medical and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems.

(B) On initial examination, the standardized questionnaire contained in Appendix D, Part 1 of this section and, on annual examination, the abbreviated standardized questionnaire contained in Appendix D, Part 2 of this section.

(C) A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered at the discretion of the physician, and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1). Interpretation and classification of chest roentgenograms shall be conducted in accordance with Appendix E of this section.

(D) Any other examinations or tests deemed necessary by the examining physician.

(3) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this rule and Appendices D and E of this section.

(ii) A description of the affected employee's duties as they relate to the employee's exposure.

(iii) The employee's representative exposure level or anticipated exposure level.

(iv) A description of any personal protective and respiratory equipment used or to be used.

(v) Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

(4) *Physician's written opinion.* (i) The employer shall obtain a written opinion from the examining physician. This written opinion shall contain the

results of the medical examination and shall include:

(A) The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos.

(B) Any recommended limitations on the employee or on the use of personal protective equipment such as respirators.

(C) A statement that the employee has been informed by the physician of the results of the medical examinations and of any medical conditions that may result from asbestos exposure.

(ii) The employer shall instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.

(iii) The employer shall provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

(n) *Recordkeeping*—(1) *Objective data for exempted operations.* (i) Where the employer has relied on objective data that demonstrate that products made from or containing asbestos are not capable of releasing fibers of asbestos in concentrations at or above the action level under the expected conditions of processing, use, or handling to exempt such operations from the initial monitoring requirements under paragraph (f)(2) of this section, the employer shall establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

(ii) The record shall include at least the following information:

(A) The product qualifying for exemption.

(B) The source of the objective data.

(C) The testing protocol, results of testing, and/or analysis of the material for the release of asbestos.

(D) A description of the operation exempted and how the data support the exemption.

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) *Exposure measurements.* (i)(A) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed in paragraph (f) of this section.

(B) The employer may utilize the services of competent organizations such as employee associations to maintain the records required by this section.

(ii) This record shall include at least the following information:

(A) The date of measurement.

(B) The operation involving exposure to asbestos that is being monitored.

(C) Sampling and analytical methods used and evidence of their accuracy.

(D) Number, duration, and results of samples taken.

(E) Type of protective devices worn, if any.

(F) Name, social security number, and exposure of the employees whose exposures are represented.

(iii) The employer shall maintain this record for at least 30 years.

(3) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (m) of this section.

(ii) The record shall include at least the following information:

(A) The name and social security number of the employee.

(B) A copy of the employee's medical examination results, including the medical history, questionnaire responses, results of any tests, and physician's recommendations.

(C) Physician's written opinions.

(D) Any employee medical complaints related to exposure to asbestos.

(E) A copy of the information provided to the physician as required by paragraph (m) of this section.

(iii) The employer shall ensure that this record is maintained for the duration of employment plus 30 years.

(4) *Training records.* The employer shall maintain all employee training

best copy available

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records for 1 year beyond the last date of employment by that employer.

(5) *Availability.* (i) The employer, upon request, shall make all records required to be maintained by this section available to the Administrator for examination and copying.

(ii) The employer, upon request, shall make any exposure records required by paragraphs (f) and (n) of this section available for examination and copying to affected employees, former employees, designated representatives, and the Administrator.

(iii) The employer, upon request, shall make employee medical records required by paragraphs (m) and (n) of this section available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Administrator.

(6) *Transfer of records.* Whenever the employer ceases to operate and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Administrator at least 90 days prior to disposal and, upon request, transmit them to the Administrator.

(o) *Effective date.* This section shall become effective March 27, 1987.

(p) *Appendices.* (1) Appendices A, C, D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

(2) Appendix B to this section is informational and is not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

APPENDIX A TO § 763.121—EPA/OSHA REFERENCE METHOD—MANDATORY

This mandatory appendix specifies the rocedure for analyzing air samples for as- estos and specifies quality control proce- ures that must be implemented by labora- ories performing the analysis. The sam- ling and analytical methods described elow represent the elements of the avail- ble monitoring methods essential to chieve adequate employee exposure moni- oring while allowing employers to use ethods that are already established within eir organizations. All employers who are quired to conduct air monitoring under 763.121(f) are required to utilize analytical boratories that use this procedure, or an equivalent method for collecting and analyzing samples.

Sampling and Analytical Procedure

1. The sampling medium for air samples shall be mixed cellulose ester filter membranes. These shall be designated by the manufacturer as suitable for asbestos counting. See below for rejection of blanks.

2. The preferred collection device shall be the 25-mm diameter cassette with an open-faced 50-mm electrically conductive extension cowl. The 37-mm cassette may be used if necessary, but only if written justification for the need to use the 37-mm filter cassette accompanies the sample results in the employee's exposure monitoring record.

3. An air flow rate between 0.5 liter/min and 2.5 liters/min shall be selected for the 25-mm cassette. If the 37-mm cassette is used, an air flow rate between 1 liter/min and 2.5 liters/min shall be selected.

4. Where possible, a sufficient air volume for each air sample shall be collected to yield between 100 and 1,300 fibers per square millimeter on the membrane filter. If a filter darkens in appearance or if loose dust is seen on the filter, a second sample shall be started.

5. Ship the samples in a rigid container with sufficient packing material to prevent dislodging the collected fibers. Packing material that has a high electrostatic charge on its surface (e.g., expanded polystyrene) cannot be used because such material can cause loss of fibers to the sides of the cassette.

6. Calibrate each personal sampling pump before and after use with a representative filter cassette installed between the pump and the calibration devices.

7. Personal samples shall be taken in the "breathing zone" of the employee (i.e., attached to or near the collar or lapel near the worker's face).

8. Fiber counts shall be made by positive phase contrast using a microscope with an 8 to 10 X eyepiece and a 40 to 45 X objective for a total magnification of approximately 400 X and a numerical aperture of 0.65 to 0.75. The microscope shall also be fitted with a green or blue filter.

9. The microscope shall be fitted with a Walton-Beckett eyepiece graticule calibrated for a field diameter of 100 micrometers (± 2 micrometers).

10. The phase-shift detection limit of the microscope shall be about 3 degrees measured using the HSE phase shift test slide as outlined below.

a. Place the test slide on the microscope stage and center it under the phase objective.

b. Bring the blocks of grooved lines into focus.

NOTE: The slide consists of seven sets of grooved lines (ca. 20 grooves to each block) in descending order of visibility from sets 1 to 7, seven being the least visible. The requirements for asbestos counting are that the microscope optics must resolve the grooved lines in set 3 completely, although they may appear somewhat faint, and that the grooved lines in sets 6 and 7 must be invisible. Sets 4 and 5 must be at least partially visible but may vary slightly in visibility between microscopes. A microscope that fails to meet these requirements has either too low or too high a resolution to be used for asbestos counting.

c. If the image deteriorates, clean and adjust the microscope optics. If the problem persists, consult the microscope manufacturer.

11. Each set of samples taken will include 10 percent blanks or a minimum of 2 blanks. The blank results shall be averaged and subtracted from the analytical results before reporting. Any samples represented by a blank having a fiber count in excess of 7 fibers/100 fields shall be rejected.

12. The samples shall be mounted by the acetone/triacetin method or a method with an equivalent index of refraction and similar clarity.

13. Observe the following counting rules.

a. Count only fiber equal to or longer than 5 micrometers. Measure the length of curved fibers along the curve.

b. In the absence of other information, count all particles as asbestos that have a length-to-width ratio (aspect ratio) of 3:1 or greater.

c. Fibers lying entirely within the boundary of the Walton-Beckett graticule field shall receive a count of 1. Fibers crossing the boundary once, having one end within the circle, shall receive the count of one-half (½). Do not count any fiber that crosses the graticule boundary more than once. Reject and do not count any other fibers even though they may be visible outside the graticule area.

d. Count bundles of fibers as one fiber unless individual fibers can be identified by observing both ends of an individual fiber.

e. Count enough graticule fields to yield 100 fibers. Count a minimum of 20 fields; stop counting at 100 fields regardless of fiber count.

14. Blind recounts shall be conducted at the rate of 10 percent.

Quality Control Procedures

1. *Intralaboratory program.* Each laboratory and/or each company with more than one microscopist counting slides shall establish a statistically designed quality assurance program involving blind recounts and comparisons between microscopists to monitor the variability of counting by each microscopist and between microscopists. In a company with more than one laboratory, the program shall include all laboratories and shall also evaluate the laboratory-to-laboratory variability.

2. *Interlaboratory program.* Each laboratory analyzing asbestos samples for compliance determination shall implement an interlaboratory quality assurance program that as a minimum includes participation of at least two other independent laboratories. Each laboratory shall participate in round robin testing at least once every 6 months with at least all the other laboratories in its interlaboratory quality assurance group. Each laboratory shall submit slides typical of its own work load for use in this program. The round robin shall be designed and results analyzed using appropriate statistical methodology.

3. All individuals performing asbestos analysis must have taken the NIOSH course for sampling and evaluating airborne asbestos dust or an equivalent course.

4. When the use of different microscopes contributes to differences between counters and laboratories, the effect of the different microscope shall be evaluated and the microscope shall be replaced, as necessary.

5. Current results of these quality assurance programs shall be posted in each laboratory to keep the microscopists informed.

APPENDIX B TO § 763.121—DETAILED PROCEDURE FOR ASBESTOS SAMPLING AND ANALYSIS—NON-MANDATORY

This appendix contains a detailed procedure for sampling and analysis and includes those critical elements specified in Appendix A of this section. Employers are not required to use this procedure, but they are required to use Appendix A of this section. The purpose of Appendix B of this section is to provide a detailed step-by-step sampling and analysis procedure that conforms to the elements specified in Appendix A of this section. Since this procedure may also standardize the analysis and reduce variability, EPA encourages employers to use this appendix.

Technique: Microscopy, Phase Contrast.

Analyte: Fibers (manual count).

Sample Preparation: Acetone/triacetin method.

Calibration: Phase-shift detection limit about 3 degrees.

Range: 100 to 1,300 fibers/mm^2 filter area.

Estimated Limit of Detection: 7 fibers/mm^2 filter area.

Sampler: Filter (0.8-1.2 μm mixed cellulose ester membrane, 25-mm diameter).

Flow Rate: 0.5 L/min to 2.5 L/min (25-mm cassette); 1.0 L/min to 2.5 L/min (37-mm cassette).

Sample Volume: Adjust to obtain 100 to ,300 fibers/mm ^{2}.

Shipment: Routine.

Sample Stability: Indefinite.

Blanks: 10% of samples (minimum 2).

Standard Analytical Error: 0.25.

Applicability: The working range is 0.02 f/ c (1920-L air sample) to 1.25 f/cc (400-L ample). The method gives an index of airorne asbestos fibers but may be used for ther materials such as fibrous glass by inerting suitable parameters into the countg rules. The method does not differentiate etween asbestos and other fibers. Asbestos bers less than ca. 0.25 μm diameter will not e detected by this method.

Interferences: Any other airborne fiber ay interfere since all particles meeting the unting criteria are counted. Chain-like rticles may appear fibrous. High levels of nfibrous dust particles may obscure fibers the field of view and raise the detection nit.

Reagents:

. Acetone.

. Triacetin (glycerol triacetate), reagent ade.

Special Precautions: Acetone is an exmely flammable liquid and precautions st be taken not to ignite it. Heating of acne must be done in a ventilated laborato- fume hood using a flameless, spark-free at source.

Equipment:

. *Collection device:* 25-mm cassette with mm electrically conductive extension l with cellulose ester filter, 0.8 to 1.2 mm e size and backup pad.

OTE: Analyze representative filters for r background before use and discard the er lot if more than 5 fibers/100 fields are nd.

Personal sampling pump, greater than qual to 0.5 l/min, with flexible connect- tubing.

Microscope, phase contrast, with green lue filter, 8 to 10X eyepiece, and 40 to phase objective (total magnification ca. X); numerical aperture = 0.65 to 0.75.

Slides, glass, single-frosted, pre-cleaned, 75 mm.

Cover slips, 25 x 25 mm, No. 1½ unless rwise specified by microscope manufac- r.

Knife, #1 surgical steel, curved blade.

Tweezers.

Flask, Guth-type, insulated neck, 250 to mL (with single-holed rubber stopper elbow-jointed glass tubing, 16 to 22 cm).

Hotplate, spark-free, stirring type; heat- mantle; or infrared lamp and magnetic er.

Syringe, hypodermic, with 22-gauge le.

11. Graticule, Walton-Beckett type with 100 μm diameter circular field at the specimen plane (area = 0.00785 mm ^{2}), (Type G-22).

NOTE: The graticule is custom-made for each microscope.

12. HSE/NPL phase contrast test slide, Mark II.

13. Telescope, ocular phase-ring centering.

14. Stage micrometer (0.01 mm divisions).

Sampling

1. Calibrate each personal sampling pump with a representative sampler in line.

2. Fasten the sampler to the worker's lapel as close as possible to the worker's mouth. Remove the top cover from the end of the cowl extension (open face) and orient face down. Wrap the joint between the extender and the monitor's body with shrink tape to prevent air leaks.

3. Submit at least two blanks (or 10 percent of the total samples, whichever is greater) for each set of samples. Remove the caps from the field blank cassettes and store the caps and cassettes in a clean area (bag or box) during the sampling period. Replace the caps in the cassettes when sampling is completed.

4. Sample at 0.5 L/min or greater. Do not exceed 1 mg total dust loading on the filter. Adjust sampling flow rate, Q (L/min), and time to produce a fiber density, E (fibers/ mm^2), of 100 to 1.300 fibers/m^2 [3.85 x 10^4 to 5 x 10^5 fibers per 25-mm filter with effective collection area (A_c = 385 mm.^{2})] for optimum counting precision (see step 21 below). Calculate the minimum sampling time, 'minimum (min) at the action level (one-half of the current standard), L (f/cc) of the fibrous aerosol being sampled:

$$\text{minimum} = \frac{(A_c)(E)}{(Q)(L)10}$$

5. Remove the field monitor at the end of sampling, replace the plastic top cover and small end caps, and store the monitor.

6. Ship the samples in a rigid container with sufficient packing material to prevent jostling or damage.

NOTE: Do not use polystyrene foam in the shipping container because of electrostatic forces which may cause fiber loss from the sample filter.

Sample Preparation

NOTE: The object is to produce samples with a smooth (nongrainy) background in a medium with a refractive index equal to or less than 1.46. The method below collapses the filter for easier focusing and produces permanent mounts which are useful for quality control and interlaboratory comparison. Other mounting techniques meeting the above criteria may also be used, e.g., the nonpermanent field mounting technique used in P & CAM 239.

7. Ensure that the glass slides and cover slips are free of dust and fibers.

8. Place 40 to 60 ml of acetone into a Guth-type flask. Stopper the flask with a single-hole rubber stopper through which a glass tube extends 5 to 8 cm into the flask. The portion of the glass tube that exits the top of the stopper (8 to 10 cm) is bent downward in an elbow that makes an angle of 20 to 30 degrees with the horizontal.

9. Place the flask in a stirring hotplate or wrap in a heating mantle. Heat the acetone gradually to its boiling temperature (ca. 58 °C).

Caution. The acetone vapor must be generated in a ventilated fume hood away from all open flames and spark sources. Alternate heating methods can be used, providing no open flame or sparks are present.

10. Mount either the whole sample filter or a wedge cut from the sample filter on a clean glass slide.

a. Cut wedges of ca. 25 percent of the filter area with a curved-blade steel surgical knife using a rocking motion to prevent tearing.

b. Place the filter or wedge, dust side up, on the slide. Static electricity will usually keep the filter on the slide until it is cleared.

c. Hold the glass slide supporting the filter approximately 1 to 2 cm from the glass tube port where the acetone vapor is escaping from the heated flask. The acetone vapor stream should cause a condensation spot on the glass slide ca. 2 to 3 cm in diameter. Move the glass slide gently in the vapor stream. The filter should clear in 2 to 5 sec. If the filter curls, distorts, or is otherwise rendered unusable, the vapor stream is probably not strong enough. Periodically wipe the outlet port with tissue to prevent liquid acetone dripping onto the filter.

d. Using the hypodermic syringe with a 22-gauge needle, place 1 to 2 drops of triacetin on the filter. Gently lower a clean 25-mm square cover slip down onto the filter at a slight angle to reduce the possibility of forming bubbles. If too many bubbles form or the amount of triacetin is insufficient, the cover slip may become detached within a few hours.

e. Glue the edges of the cover slip to the glass slide using a lacquer or nail polish.

NOTE: If clearing is slow, the slide preparation may be heated on a hotplate (surface temperature 50°C) for 15 min. to hasten clearing. Counting may proceed immediately after clearing and mounting are completed.

Calibration and Quality Control

11. *Calibration of the Walton-Beckett graticule.* The diameter, d_c (mm), of the circular counting area and the disc diameter must be specified when ordering the graticule.

a. Insert any available graticule into the eyepiece and focus so that the graticule lines are sharp and clear.

b. Set the appropriate interpupillary distance and, if applicable, reset the binocular head adjustment so that the magnification remains constant.

c. Install the 40 to 45 X phase objective.

d. Place a stage micrometer on the microscope object stage and focus the microscope on the graduated lines.

e. Measure the magnified grid length, L_o (um), using the stage micrometer.

f. Remove the graticule from the microscope and measure its actual grid length, L_a (mm). This can best be accomplished by using a stage fitted with verniers.

g. Calculate the circle diameter, d_c (mm), for the Walton-Beckett graticule:

$$d_c = \frac{L_a \times D}{L_o}$$

Example: If $L_o = 108$ um, $L_a = 2.93$ mm and $D = 100$ um, then $d_c = 2.71$ mm.

h. Check the field diameter, D(acceptable range 100 mm ±2 mm) with a stage micrometer upon receipt of the graticule from the manufacturer. Determine field area (mm²).

12. *Microscope adjustments.* Follow the manufacturer's instructions and also the following:

a. Adjust the light source for even illumination across the field of view at the condenser iris.

NOTE: Kohler illumination is preferred where available.

b. Focus on the particulate material to be examined.

c. Make sure that the field iris is in focus centered on the sample, and open only enough to fully illuminate the field of view.

d. Use the telescope ocular supplied by the manufacturer to ensure that the phase rings (annular diaphragm and phase-shifting elements) are concentric.

13. Check the phase-shift detection limit of the microscope periodically.

a. Remove the HSE/NPL phase-contrast test slide from its shipping container and center it under the phase objective.

b. Bring the blocks of grooved lines into focus.

NOTE: The slide consists of seven sets of grooves (ca. 20 grooves to each block) in descending order of visibility from sets 1 to 7. The requirements for counting are that the microscope optics must resolve the grooved lines in set 3 completely, although they may appear somewhat faint, and that the grooved lines in sets 6 to 7 must be invisible. Sets 4 and 5 must be at least partially visible but may vary slightly in visibility between microscopes. A microscope which fails to meet these requirements has either too low or too high a resolution to be used for asbestos counting.

c. If the image quality deteriorates, clean the microscope optics and, if the problem persists, consult the microscope manufacturer.

14. *Quality control of fiber counts.*

a. Prepare and count field blanks along with the field samples. Report the counts on each blank. Calculate the mean of the field blank counts and subtract this value from each sample count before reporting the results.

NOTE 1: The identity of the blank filters should be unknown to the counter until all ounts have been completed.

NOTE 2: If a field blank yields fiber counts reater than 7 fibers/100 fields, report possible contamination of the samples.

b. Perform blind recounts by the same ounter on 10 percent of filters counted slides relabeled by a person other than the ounter).

15. Use the following test to determine hether a pair of counts on the same filter hould be rejected because of possible bias. his statistic estimates the counting repeaability at the 95 percent confidence level. iscard the sample if the difference beween the two counts exceeds 2.77 (F)s_r here F=average of the two fiber counts nd s_r=relative standard deviation, which hould be derived by each laboratory based n historical in-house data.

NOTE: If a pair of counts is rejected as a sult of this test, recount the remaining mples in the set and test the new counts ainst the first counts. Discard all rejected ired counts.

16. Enroll each new counter in a training urse that compares performance of unters on a variety of samples using this ocedure.

NOTE: To ensure good reproducibility, all oratories engaged in asbestos counting e required to participate in the Proficien- Analytical Testing (PAT) Program and ould routinely participate with other asstos fiber counting laboratories in the exange of field samples to compare permance of counters.

Measurement

7. Place the slide on the mechanical ge of the calibrated microscope with the ter of the filter under the objective lens. Focus the microscope on the plane of the filter.

18. Regularly check phase-ring alignment and Kohler illumination.

19. The following are the counting rules:

a. Count only fibers longer than 5 um. Measure the length of curved fibers along the curve.

b. Count only fibers with a length-to-width ratio equal to or greater than 3:1.

c. For fibers that cross the boundary of the graticule field, do the following:

(1) Count any fiber longer than 5 um that lies entirely within the graticule area.

(2) Count as ½ fiber any fiber with only one end lying within the graticule area.

(3) Do not count any fiber that crosses the graticule boundary more than once.

(4) Reject and do not count all other fibers.

d. Count bundles of fibers as one fiber unless individual fibers can be identified by observing both ends of a fiber.

e. Count enough graticule fields to yield 100 fibers. Count a minimum of 20 fields. Stop at 100 fields regardless of fiber count.

20. Start counting from one end of the filter and progress along a radial line to the other end, shift either up or down on the filter, and continue in the reverse direction. Select fields randomly by looking away from the eyepiece briefly while advancing the mechanical stage. When an agglomerate covers ca. ⅙ or more of the field of view, reject the field and select another. Do not report rejected fields in the number of total fields counted.

NOTE: When counting a field, continuously scan a range of focal planes by moving the fine focus knob to detect very fine fibers which have become embedded in the filter. The small-diameter fibers will be very faint but are an important contribution to the total count.

Calculations

21. Calculate and report fiber density on the filter, E (fibers/mm^2); by dividing the total fiber count, F; minus the mean field blank count, B, by the number of fields, n; and the field area, A_f (0.00785 mm^2 for a properly calibrated Walton-Beckett graticule):

$$\frac{E=(F/n_f-(B/n_b)\text{ fibers/mm}^2}{A_f}$$

where:

n_f—number of fields in submission sample
n_b—number of fields in bulk sample

22. Calculate the concentration, C (f/cc), of fibers in the air volume sampled, V (L),

using the effective collection area of the filter, A_c (385 mm^2 for a 25-mm filter):

$$C = \frac{(E)(A_c)}{V(10^3)}$$

NOTE: Periodically check and adjust the value of A_c, if necessary.

APPENDIX C TO § 763.121—QUALITATIVE AND QUANTITATIVE FIT TESTING PROCEDURES—MANDATORY

Qualitative Fit Test Protocols

I. Isoamyl Acetate Protocol

A. Odor Threshold Screening. 1. Three 1-liter glass jars with metal lids (e.g. Mason or Bell jars) are required.

2. Odor-free water (e.g. distilled or spring water) at approximately 25 °C shall be used for the solutions.

3. The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor-free water in a 1-liter jar and shaking for 30 seconds. This solution shall be prepared new at least weekly.

4. The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but shall not be connected to the same recirculating ventilation system.

5. The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor-free water using a clean dropper or pipette. Shake for 30 seconds and allow to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution may be used for only one day.

6. A test blank is prepared in a third jar by adding 500 cc of odor-free water.

7. The odor test and test blank jars shall be labeled 1 and 2 for jar identification. If the labels are put on the lids they can be periodically peeled, dried off and switched to maintain the integrity of the test.

8. The following instructions shall be typed on a card and placed on the table in front of the two test jars (i.e. 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

9. The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

10. If the test subject is unable to identify correctly the jar containing the odor test solution, the IAA qualitative fit test may not be used.

11. If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

B. Respirator selection. 1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers. The selection shall include at least five sizes of elastomeric half facepieces, from at least two manufacturers.

2. The selection process shall be conducted in a room separate from the fit-test chamber to prevent odor fatigue. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a "comfortable" respirator. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, as it is only a review.

3. The test subject should understand that the employee is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape and, if fitted properly and used properly, will provide adequate protection.

4. The test subject holds each facepiece up to the face and eliminates those which obviously do not give a comfortable fit. Normally, selection will begin with a half-mask and if a good fit cannot be found, the subject will be asked to test the full facepiece respirators. (A small percentage of users will not be able to wear any half-mask.)

5. The more comfortable facepieces are noted; the most comfortable mask is donned and *worn at least five minutes* to assess comfort. All donning and adjustments of the facepieces shall be performed by the test subject without assistance from the test conductor or other person. Assistance in assessing comfort can be given by discussing the points of #6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

- Positioning of mask on nose.
- Room for eye protection.

- Room to talk
- Positioning mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed.
- Strap tension.
- Fit across nose bridge.
- Distance from nose to chin.
- Tendency to slip.
- Self-observation in mirror.

8. The test subject shall conduct the con- entional negative and positive-pressure fit hecks (e.g. see ANSI Z88.2-1980). Before onducting the negative- or positive-pres- ure test, the subject shall be told to "seat" he mask by rapidly moving the head from ide-to-side and up and down, while taking a ew deep breaths.

9. The test subject is now ready for fit esting.

10. After passing the fit test, the test sub- ect shall be questioned again regarding the omfort of the respirator. If it has become ncomfortable, another model of respirator hall be tried.

11. The employee shall be given the op- ortunity to select a different facepiece and e retested if the chosen facepiece becomes creasingly uncomfortable at any time.

C. *Fit test.* 1. The fit test chamber shall be milar to a clear 55 gallon drum liner sus- ended inverted over a 2 foot diameter ame, so that the top of the chamber is out 6 inches above the test subject's head. he inside top center of the chamber shall ve a small hook attached.

2. Each respirator used for the fitting and testing shall be equipped with organic por cartridges or offer protection against ganic vapors. The cartridges or masks all be changed at least weekly.

. After selection, donning, and properly justing a respirator, the test subject shall ar it to the fit testing room. This room all be separate from the room used for or threshold screening and respirator se- tion, and shall be well ventilated, as by exhaust fan or lab hood, to prevent gen- l room contamination.

. A copy of the following test exercises d rainbow passage shall be taped to the ide of the test chamber:

Test Exercises

Breathe normally.

. Breathe deeply. Be certain breaths are p and *regular.*

i. Turn head all the way from one side to other. Inhale on each side. Be certain vement is complete. Do not bump the pirator against the shoulders.

. Nod head up-and-down. Inhale when d is in the full up position (looking ard ceiling). Be certain motions are com- e and made about every second. Do not np the respirator on the chest.

v. *Talking.* Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

vi. Jogging in place.

vii. Breathe normally.

Rainbow Passage. When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

5. Each test subject shall wear the respirator for at least 10 minutes before starting the fit test.

6. Upon entering the test chamber, the test subject shall be given a 6 inch by 5 inch piece of paper towel or other porous absorbent single ply material, folded in half and wetted with three-quarters of one cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

7. Allow two minutes for the IAA test concentration to be reached before starting the fit-test exercises. This would be an appropriate time to talk with the test subject, to explain the fit test, the importance of cooperation, the purpose for the head exercises, or to demonstrate some of the exercises.

8. Each exercise described in #4 above shall be performed for at least one minute.

9. If at any time during the test, the subject detects the banana-like odor of IAA, the test has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

10. If the test is failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber, and again begin the procedure described in the c(4) through c(8) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

11. If a person cannot pass the fit test described above wearing a half-mask respirator from the available selection, full facepiece models must be used.

12. When a respirator is found that passes the test, the subject breaks the faceseal and takes a breath before exiting the chamber.

This is to assure that the reason the test subject is not smelling the IAA is the good fit of the respirator facepiece seal and not olfactory fatigue.

13. When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the area from becoming contaminated, the used towels shall be kept in a self-sealing bag so there is no significant IAA concentration buildup in the test chamber during subsequent tests.

14. At least two facepieces shall be selected for the IAA test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

15 Persons who have successfully passed this fit test with a half-mask respirator may be assigned the use of the test respirator in atmospheres with up to 10 times the PEL of airborne asbestos.

16. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

17. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

18. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

19. Qualitative fit testing shall be repeated at least every six months.

20. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal.

(3) Significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures.

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. Recordkeeping. A summary of all test results shall be maintained in each office for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of the test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

II. Saccharin Solution Aerosol Protocol

A. Respirator selection. Respirators shall be selected as described in section IB (respirator selection) above, except that each respirator shall be equipped with a particulate filter.

B. Taste threshold screening. 1. An enclosure about head and shoulders shall be used for threshold screening (to determine if the individual can taste saccharin) and for fit testing. The enclosure shall be approximately 12 inches in diameter by 14 inches tall with at least the front clear to allow free movement of the head when a respirator is worn.

2. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

3. The entire screening and testing procedure shall be explained to the test subject prior to conducting the screening test.

4. During the threshold screening test, the test subject shall don the test enclosure and breathe with mouth open with tongue extended.

5. Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. This nebulizer shall be clearly marked to distinquish it from the fit test solution nebulizer.

6. The threshold check solution consists of 0.83 gram of sodium saccharin, USP in water. It can be prepared by putting 1 cc of the test solution (see C.7 below) in 100 cc of water.

7. To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then is released and allowed to expand fully.

8. Ten squeezes of the nebulizer bulb are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

9. If the first response is negative, ten more squeezes of the nebulizer bulb are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

10. If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

11. The test conductor will take note of the number of squeezes required to elicit a taste response.

12. If the saccharin is not tasted after 30 squeezes (Step 10), the saccharin fit test cannot be performed on the test subject.

13. If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

14. Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

5. The nebulizer shall be thoroughly
sed in water, shaken dry, and refilled at
st every four hours.

Fit Test. 1. The test subject shall don
d adjust the respirator without assistance
m any person.

The fit test uses the same enclosure de-
ibed in IIB above.

Each test subject shall wear the respira-
for at least 10 minutes before starting
fit test.

The test subject shall don the enclosure
ile wearing the respirator selected in sec-
n IB above. This respirator shall be prop-
y adjusted and equipped with a particu-
filter.

The test subject may not eat, drink
cept plain water), or chew gum for 15
nutes before the test.

A second DeVilbiss Model 40 Inhalation
dication Nebulizer is used to spray the fit
solution into the enclosure. This nebu-
r shall be clearly marked to distinquish
rom the screening test solution nebulizer.

The fit test solution is prepared by
ing 83 grams of sodium saccharin to 100
f warm water.

As before, the test subject shall breathe
n mouth open and tongue extended.

The nebulizer is inserted into the hole
he front of the enclosure and the fit test
tion is sprayed into the enclosure using
same technique as for the taste thresh-
screening and the same number of
eezes required to elicit a taste response
the screening. (See B.8 through B.10
ve).

After generation of the aerosol, read
following instructions to the test sub-
The test subject shall perform the ex-
ses for one minute each.

Breathe normally.

Breathe deeply. Be certain breaths are
and *regular.*

Turn head all the way from one side to
other. Be certain movement is complete.
le on each side. Do not bump the respi-
r against the shoulders.

Nod head up-and-down. Be certain mo-
s are complete. Inhale when head is in
full up position (when looking toward
ceiling). Do not bump the respirator on
chest.

Talking. Talk aloud and slowly for sev-
minutes. The following paragraph is
d the Rainbow Passage. Reading it will
t in a wide range of facial movements,
thus be useful to satisfy this require-
. Alternative passages which serve the
purpose may also be used.

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apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

vi. Jogging in place.

vii. Breathe normally.

11. At the beginning of each exercise, the aerosol concentration shall be replenished using one-half the number of squeezes as initially described in C.9.

12. The test subject shall indicate to the test conductor, if at any time during the fit test, the taste of saccharin is detected.

13. If the saccharin is detected, the fit is deemed unsatisfactory and a different respirator shall be tried.

14. At least two facepieces shall be selected by the saccharin solution aerosol test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

15. Successful completion of the test protocol shall allow the use of the half mask tested respirator in contaminated atmospheres up to 10 times the PEL of asbestos. In other words this protocol may be used to assign protection factors no higher than ten.

16. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

17. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

18. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

19. Qualitative fit testing shall be repeated at least every six months.

20. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. Recordkeeping. A summary of all test results shall be maintained in each office for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

III. Irritant Fume Protocol

A. Respirator selection. Respirators shall be selected as described in section IB above, except that each respirator shall be equipped with a high-efficiency cartridge.

B. Fit test. 1. The test subject shall be allowed to smell a weak concentration of the irritant smoke to familiarize the subject with the characteristic odor.

2. The test subject shall properly don the respirator selected as above, and wear it for at least 10 minutes before starting the fit test.

3. The test conductor shall review this protocol with the test subject before testing.

4. The test subject shall perform the conventional positive pressure and negative pressure fit checks (see ANSI Z88.2 1980). Failure of either check shall be cause to select an alternate respirator.

5. Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part #5645, or equivalent. Attach a short length of tubing to one end of the smoke tube. Attach the other end of the smoke tube to a low pressure air pump set to deliver 200 milliliters per minute.

6. Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep the eyes closed while the test is performed.

7. The test conductor shall direct the stream of irritant smoke from the tube towards the faceseal area of the test subject. The person conducting the test shall begin with the tube at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

8. The test subject shall be instructed to do the following exercises while the respirator is being challenged by the smoke. Each exercise shall be performed for one minute.

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are *deep* and *regular.*

iii. Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Be certain motions are complete and made every second. Inhale when head is in the full up position (looking toward ceiling). Do not bump the respirator against the chest.

v. *Talking.* Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Repeating it after the test conductor (keeping eyes closed) will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

Rainbow Passage. When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

vi. Jogging in place.

vii. Breathe normally.

9. The test subject shall indicate to the test conductor if the irritant smoke is detected. If smoke is detected, the test conductor shall stop the test. In this case, the tested respirator is rejected and another respirator shall be selected.

10. Each test subject passing the smoke test (i.e. without detecting the smoke) shall be given a sensitivity check of smoke from the same tube to determine if the test subject reacts to the smoke. Failure to evoke a response shall void the fit test.

11. Steps B4, B9, B10 of this fit test protocol shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agents.

12. At least two facepieces shall be selected by the irritant fume test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

13. Respirators successfully tested by the protocol may be used in contaminated atmospheres up to ten times the PEL of asbestos.

14. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

15. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

16. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory diseases or pulmonary medicine to determine whether the test subject can wear a

spirator while performing her or his ities.

17. Qualitative fit testing shall be repeat- lat least every six months.

18. In addition, because the sealing of the spirator may be affected, qualitative fit sting shall be repeated immediately when e test subject has a:

1) Weight change of 20 pounds or more,

2) Significant facial scarring in the area the facepiece seal,

3) Significant dental changes; i.e., multi- e extractions without prosthesis, or ac- iring dentures,

4) Reconstructive or cosmetic surgery, or

5) Any other condition that may inter- e with facepiece sealing.

C. *Recordkeeping.* A summary of all test ults shall be maintained in each office 3 years. The summary shall include:

1) Name of test subject.

2) Date of testing.

3) Name of test conductor.

4) Respirators selected (indicate manu- turer, model, size and approval number).

5) Testing agent.

Quantitative Fit Test Procedures

1. General

. The method applies to the negative- ssure nonpowered air-purifying respira- s only.

. The employer shall assign one individ- who shall assume the full responsibility implementing the respirator quantita- fit test program.

2. Definitions

"Quantitative Fit Test" means the surement of the effectiveness of a respi- r seal in excluding the ambient atmos- re. The test is performed by dividing the sured concentration of challenge agent test chamber by the measured concen- ion of the challenge agent inside the irator facepiece when the normal air fying element has been replaced by an ntially perfect purifying element.

"Challenge Agent" means the air con- inant introduced into a test chamber so its concentration inside and outside the irator may be compared.

"Test Subject" means the person wear- the respirator for quantitative fit test-

"Normal Standing Position" means ding erect and straight with arms down g the sides and looking straight ahead.

"Fit Factor" means the ratio of chal- e agent concentration outside with re- t to the inside of a respirator inlet cov- g (facepiece or enclosure).

3. Apparatus

a. *Instrumentation.* Corn oil, sodium chloride or other appropriate aerosol generation, dilution, and measurement systems shall be used for quantitative fit test.

b. *Test chamber.* The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without distributing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air yet uniform in concentration throughout the chamber.

c. When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

d. The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000.

e. The combination of substitute air-purifying elements (if any), challenge agent, and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of PEL to the challenge agent at any time during the testing process.

f. The sampling port on the test specimen respirator shall be placed and constructed so that there is no detectable leak around the port, a free air flow is allowed into the sampling line at all times and so there is no interference with the fit or performance of the respirator.

g. The test chamber and test set-up shall permit the person administering the test to observe one test subject inside the chamber during the test.

h. The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent constant within a 10 percent variation for the duration of the test.

i. The time lag (interval between an event and its being recorded on the strip chart) of the instrumentation may not exceed 2 seconds.

j. The tubing for the test chamber atmosphere and for the respirator sampling port shall be the same diameter, length and material. It shall be kept as short as possible. The smallest diameter tubing recommended by the manufacturer shall be used.

k. The exhaust flow from the test chamber shall pass through a high-efficiency filter before release to the room.

l. When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

4. Procedural Requirements

a. The fitting of half-mask respirators should be started with those having multiple sizes and a variety of interchangeable cartridges and canisters such as the MSA Comfo II-M, North M, Survivair M, A-O M, or Scott-M. Use either of the tests outlined below to assure that the facepiece is properly adjusted.

(1) *Positive pressure test.* With the exhaust port(s) blocked, the negative pressure of slight inhalation should remain constant for several seconds.

(2) *Negative pressure test.* With the intake port(s) blocked, the negative pressure of slight inhalation should remain constant for several seconds.

b. After a facepiece is adjusted, the test subject shall wear the facepiece for at least 5 minutes before conducting a qualitative test by using either of the methods described below and using the exercise regime described in 5.a., b., c., d. and e.

(1) *Isoamyl acetate test.* When using organic vapor cartridges, the test subject who can smell the odor should be unable to detect the odor of isoamyl acetate squirted into the air near the most vulnerable portions of the facepiece seal. In a location which is separated from the test area, the test subject shall be instructed to close her/his eyes during the test period. A combination cartridge or canister with organic vapor and high-efficiency filters shall be used when available for the particular mask being tested. The test subject shall be given an opportunity to smell the odor of isoamyl acetate before the test is conducted.

(2) *Irritant fume test.* When using high-efficiency filters, the test subject should be unable to detect the odor of irritant fume (stannic chloride or titanium tetrachloride ventilation smoke tubes) squirted into the air near the most vulnerable portions of the facepiece seal. The test subject shall be instructed to close her/his eyes during the test period.

c. The test subject may enter the quantitative testing chamber only if she or he has obtained a satisfactory fit as stated in 4.b. of this Appendix.

d. Before the subject enters the test chamber, a reasonably stable challenge agent concentration shall be measured in the test chamber.

e. Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half-mask and 1 percent for a full facepiece.

f. A stable challenge agent concentration shall be obtained prior to the actual start of testing.

g. Respirator restraining straps may not be overtightened for testing. The straps shall be adjusted by the wearer to give a reasonably comfortable fit typical of normal use.

5. Exercise Regime

Prior to entering the test chamber, the test subject shall be given complete instructions as to her/his part in the test procedures. The test subject shall perform the following exercises, in the order given, for each independent test.

a. *Normal Breathing (NB).* In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

b. *Deep Breathing (DB).* In the normal standing position the subject shall do deep breathing for at least one minute pausing so as not to hyperventilate.

c. *Turning head side to side (SS).* Standing in place the subject shall slowly turn his/her head from side between the extreme positions to each side. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

d. *Moving head up and down (UD).* Standing in place, the subject shall slowly move his/her head up and down between the extreme position straight up and the extreme position straight down. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

e. *Reading (R).* The subject (keeping eyes closed) shall repeat after the test conductor or the 'rainbow passage' at the end of this section. The subject shall talk slowly aloud so as to be heard clearly by the test conductor or monitor.

f. *Grimace (G).* The test subject shall grimace, smile, frown, and generally contort the face using the facial muscles. Continue for at least 15 seconds.

g. *Bend over and touch toes (B).* The test subject shall bend at the waist and touch toes and return to upright position. Repeat for at least 30 seconds.

h. *Jogging in place (J).* The test subject shall jog in place for at least 30 seconds.

i. *Normal Breathing (NB).* Same as exercise a.

Rainbow Passage. When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

6. Termination of Test

The test shall be terminated whenever any single peak penetration exceeds 5 percent for halfmasks and 1 percent for full facepieces. The test subject may be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed nadequate.

7. Calculation of Fit Factors

a. The fit factor determined by the quantitative fit test equals the average concentration inside the respirator.

b. The average test chamber concentraion is the arithmetic average of the test hamber concentration at the beginning nd the end of the test.

c. The average peak concentration of the hallenge agent inside the respirator shall e the arithmetic average peak concentraions for each of the nine exercises of the est which are computed as the arithmetic verage of the peak concentrations found or each breath during the exercise.

d. The average peak concentration for an xercise may be determined graphically if here is not a great variation in the peak oncentrations during a single exercise.

8. Interpretation of Test Results

The fit factor measured by the quantitave fit testing shall be the lowest of the ree protection factors resulting from ree independent tests.

9. Other Requirements

a. The test subject shall not be permitted wear a halfmask or full facepiece mask if e minimum fit factor of 100 or 1,000, reectively, cannot be obtained. If hair owth or apparel interfere with a satisfacry fit, then they shall be altered or reoved so as to eliminate interference and low a satisfactory fit. If a satisfactory fit still not attained, the test subject must e a positive-pressure respirator such as wered air-purifying respirators, supplied respirator, or self-contained breathing paratus.

b. The test shall not be conducted if there any hair growth between the skin and the cepiece sealing surface.

c. If a test subject exhibits difficulty in eathing during the tests, she or he shall referred to a physician trained in respira diseases or pulmonary medicine to deterne whether the test subject can wear a pirator while performing her or his ties.

d. The test subject shall be given the oprtunity to wear the assigned respirator one week. If the respirator does not proe a satisfactory fit during actual use, the test subject may request another QNFT which shall be performed immediately.

e. A respirator fit factor card shall be issued to the test subject with the following information:

(1) Name.

(2) Date of fit test.

(3) Protection factors obtained through each manufacturer, model and approval number of respirator tested.

(4) Name and signature of the person that conducted the test.

f. Filters used for qualitative or quantitative fit testing shall be replaced weekly, whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily or sooner if there is any indication of breakthrough by the test agent.

10. Retesting

In addition, because the sealing of the respirator may be affected, quantitative fit testing shall be repeated immediately when the test subject has a:

a. Weight change of 20 pounds or more,

b. Significant facial scarring in the area of the facepiece seal,

c. Significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures,

d. Reconstructive or cosmetic surgery, or

e. Any other condition that may interfere with facepiece sealing.

11. Recordkeeping

A summary of all test results shall be maintained for 3 years. The summary shall include:

a. Name of test subject.

b. Date of testing.

c. Name of the test conductor.

d. Fit factors obtained from every respirator tested (indicate manufacturer, model, size and approval number).

APPENDIX D TO § 763.121—MEDICAL QUESTIONNAIRES—MANDATORY

This mandatory appendix contains the medical questionnaires that must be administered to all employees who are exposed to asbestos above the action level, and who will therefore be included in their employer's medical surveillance program. Part 1 of the appendix contains the Initial Medical Questionnaire, which must be obtained for all new hires who will be covered by the medical surveillance requirements. Part 2 includes the abbreviated Periodical Medical Questionnaire, which must be administered to all employees who are provided periodic medical examinations under the medical surveillance provisions of the standard.

Part 1
INITIAL MEDICAL QUESTIONNAIRE

1. NAME ______________________________

2. SOCIAL SECURITY # ___ ___ ___ ___ ___ ___ ___ ___ ___
1 2 3 4 5 6 7 8 9

3. CLOCK NUMBER ___ ___ ___ ___ ___ ___
10 11 12 13 14 15

4. PRESENT OCCUPATION ______________________

5. PLANT ______________________

6. ADDRESS ______________________

7. ______________________
(Zip Code)

8. TELEPHONE NUMBER ______________________

9. INTERVIEWER ______________________

10. DATE ______________________ ___ ___ ___ ___ ___ ___
16 17 18 19 20 21

11. Date of Birth ______________________ ___ ___ ___ ___ ___ ___
Month Day Year 22 23 24 25 26 27

12. Place of Birth ______________________

13. Sex
1. Male ___
2. Female ___

14. What is your marital status?
1. Single ___
2. Married ___
3. Widowed ___
4. Separated/ Divorced ___

15. Race
1. White ___
2. Black ___
3. Asian ___
4. Hispanic ___
5. Indian ___
6. Other ___

16. What is the highest grade completed in school? ______________
(For example 12 years is completion of high school)

OCCUPATIONAL HISTORY

17A. Have you ever worked full time (30 hours per week or more) for 6 months or more? 1. Yes ___ 2. No ___

IF YES TO 17A:

B. Have you ever worked for a year or more in any dusty job? 1. Yes ___ 2. No ___
3. Does Not Apply ___

Specify job/industry ______________________ Total Years Worked ___

Was dust exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

C. Have you even been exposed to gas or chemical fumes in your work? 1. Yes ___ 2. No ___
Specify job/industry ______________________ Total Years Worked ___

Was exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

D. What has been your usual occupation or job--the one you have worked at the longest?

1. Job occupation ______________________
2. Number of years employed in this occupation ______________
3. Position/job title ______________________
4. Business, field or industry ______________________

(Record on lines the years in which you have worked in any of these industries, e.g., 1960-1969).
Have you ever worked:

	YES	NO
E. In a mine?............................	☐	☐
F. In a quarry?..........................	☐	☐
G. In a foundry?.........................	☐	☐
H. In a pottery?.........................	☐	☐
I. In a cotton, flax or hemp mill?.........	☐	☐
J. With asbestos, tremolite, anthophyllite, or actinolite?......................	☐	☐

18. PAST MEDICAL HISTORY

	YES	NO
A. Do you consider yourself to be in good health?	☐	☐

If "NO" state reason ______________________

B. Have you any defect of vision?.............. ☐ ☐

If "YES" state nature of defect ____________________

C. Have you any hearing defect?................ ☐ ☐

If "YES" state nature of defect ____________________

D. Are you suffering from or have you ever suffered from:

a. Epilepsy (or fits, seizures, convulsions)? ☐ ☐

b. Rheumatic fever? ☐ ☐

c. Kidney disease? ☐ ☐

d. Bladder disease? ☐ ☐

e. Diabetes? ☐ ☐

f. Jaundice? ☐ ☐

19. CHEST COLDS AND CHEST ILLNESSES

19A. If you get a cold, does it usually go to your chest? (Usually means more then 1/2 the time) 1. Yes __ 2. No __ 3. Don't get colds __

20A. During the past 3 years, have you had any chest illnesses that have kept you off work, indoors at home, or in bed? 1. Yes __ 2. No __

IF YES TO 20A:

B. Did you produce phlegm with any of these chest illness? 1. Yes __ 2. No __ 3. Does not apply __

C. In the last 3 years, how many illnesses with (increased) phlegm did you have which lasted a week or more? Number of illnesses __ No such illnesses __

21. Did you have any lung trouble before the age of 16? 1. Yes __ 2. No __

22. Have you ever had any of the following?

1A. Attacks of bronchitis? 1. Yes __ 2. No __

IF YES TO 1A: B. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does not apply ___
C. At what age was your first attack?	Age in Years ___ Does not apply ___
2A. Pneumonia (including bronchopneumonia)?	1. Yes ___ 2. No ___
IF YES TO 2A: B. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
C. At what age did you first have it?	Age in Years ___ Does Not Apply ___
3A. Hay Fever?	1. Yes ___ 2. No ___
IF YES TO 3A: B. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
C. At what age did it start?	Age in Years ___ Does Not Apply ___
23A. Have you ever had chronic bronchitis?	1. Yes ___ 2. No ___
IF YES TO 23A: B. Do you still have it?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
C. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
D. At what age did it start?	Age in Years ___ Does Not Apply ___
24A. Have you ever had emphysema?	1. Yes ___ 2. No ___
IF YES TO 24A: B. Do you still have it?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
C. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
D. At what age did it start?	Age in Years ___ Does Not Apply ___
25A. Have you ever had asthma?	1. Yes ___ 2. No ___
IF YES TO 25A: B. Do you still have it?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
C. Was it confirmed by a doctor?	1. Yes ___ 2. No ___ 3. Does Not Apply ___
D. At what age did it start?	Age in Years ___ Does Not Apply ___

E. If you no longer have it, at what age did it stop? Age Stopped ___ Does Not Apply ___

26. Have you ever had:

A. Any other chest illness? 1. Yes ___ 2. No ___
If yes, please specify ___________________________

B. Any chest operations? 1. Yes ___ 2. No ___
If yes, please specify ___________________________

C. Any chest injuries? 1. Yes ___ 2. No ___
If yes, please specify ___________________________

27A. Has a doctor ever told you that you had heart trouble? 1. Yes ___ 2. No ___

IF YES TO 27A:

B. Have you ever had treatment for heart trouble in the past 10 years? 1. Yes ___ 2. No ___ 3. Does Not Apply ___

28A. Has a doctor ever told you that you had high blood pressure? 1. Yes ___ 2. No ___

IF YES TO 28A:

B. Have you had any treatment for high blood pressure (hypertension) in the past 10 years? 1. Yes ___ 2. No ___ 3. Does Not Apply ___

29. When did you last have your chest X-rayed? (Year) ___ ___ ___ ___
25 26 27 28

30. Where did you last have your chest X-rayed (if known) ___________

What was the outcome? ___________________________

FAMILY HISTORY

31. Were either of your natural parents ever told by a doctor that they had a chronic lung conditions such as:

	Father 1. Yes	Father 2. No	Father 3. Don't Know	Mother 1. Yes	Mother 2. No	Mother 3. Don't Know
A. Chronic Bronchitis?	___	___	___	___	___	___
B. Emphysema?	___	___	___	___	___	___
C. Asthma?	___	___	___	___	___	___

		Father			Mother	
	1. Yes	2. No	3. Don't Know	1. Yes	2. No	3. Don't Know
D. Lung cancer?	___	___	___	___	___	___
E. Other chest conditions	___	___	___	___	___	___
F. Is parent currently alive?	___	___	___	___	___	___
G. Please Specify	___ Age if Living ___ Age at Death ___ Don't Know			___ Age if Living ___ Age at Death ___ Don't Know		
H. Please specify cause of ceath	___________			___________		

COUGH

2A.	Do you usually have a cough? (Count a cough with first smoke or on first going out of doors. Exclude clearing of throat.) [If no, skip to question 32C.]	1. Yes ___ 2. No ___
B.	Do you usually cough as much as 4 to 6 times a day 4 or more days out of the week?	1. Yes ___ 2. No ___
C.	Do you usually cough at all on getting up or first thing in the morning?	1. Yes ___ 2. No ___
D.	Do you usually cough at all during the rest of the day or at night?	1. Yes ___ 2. No ___

IF YES TO ANY OF ABOVE (32A, B, C, OR D), ANSWER THE FOLLOWING. IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO NEXT PAGE

E.	Do you usually cough like this on most days for 3 consecutive months or more during the year?	1. Yes ___ 2. No ___ 3. Does not apply ___
F.	For how many years have you had the cough?	Number of Years ___ Does not apply ___
A.	Do you usually bring up phlegm from your chest? (Count phlegm with the first smoke or on first going out of doors. Exclude phlegm from the nose. Count swallowed phlegm.) (If no, skip to 33C)	1. Yes ___ 2. No ___
B.	Do you usually bring up phlegm like this as much as twice a day 4 or more days out of the week?	1. Yes ___ 2. No ___
C.	Do you usually bring up phlegm at all on getting up or first thing in the morning?	1. Yes ___ 2. No ___

D.	Do you usually bring up phlegm at all during the rest of the day or at night?	1. Yes ___ 2. No ___

IF YES TO ANY OF THE ABOVE (33A, B, C, OR D), ANSWER THE FOLLOWING:
IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E.	Do you bring up phlegm like this on most days for 3 consecutive months or more during the year?	1. Yes ___ 2. No ___ 3. Does not apply ___
F.	For how many years have you had trouble with phlegm?	Number of years ___ Does not apply ___

EPISODES OF COUGH AND PHLEGM

34A.	Have you had periods of episodes of (increased*) cough and phlegm lasting for 3 weeks or more each year? *(For persons who usually have cough and/or phlegm)	1. Yes ___ 2. No ___
	If YES to 34A	
B.	For how long have you had at least 1 such episode per year?	Number of years ___ Does not apply ___

WHEEZING

35A.	Does your chest ever sound wheezy or whistling	
	1. When you have a cold?	1. Yes ___ 2. No ___
	2. Occasionally apart from colds?	1. Yes ___ 2. No ___
	3. Most days or nights?	1. Yes ___ 2. No ___
	IF YES TO 1, 2, OR 3 IN 35A	
B.	For how many years has this been present?	Number of years ___ Does not apply ___
36A.	Have you ever had an attack of wheezing that has made you feel short of breath?	1. Yes ___ 2. No ___
	IF YES TO 36A	
B.	How old were you when you had your first such attack?	Age in years ___ Does not apply ___
C.	Have you had 2 or more such episodes?	1. Yes ___ 2. No ___ 3. Does not apply ___
D.	Have you ever required medicine or treatment for the(se) attack(s)?	1. Yes ___ 2. No ___ 3. Does not apply ___

BREATHLESSNESS

37.	If disabled from walking by any condition other than heart or lung disease, please describe and proceed to question 39A. Nature of condition(s) ___	
38A.	Are you troubled by shortness of breath when hurrying on the level or walking up a slight hill?	1. Yes ___ 2. No ___
	IF YES TO 38 A	
B.	Do you have to walk slower than people of your age on the level because of breathlessness?	1. Yes ___ 2. No ___ 3. Does not apply ___
C.	Do you ever have to stop for breath when walking at your own pace on the level?	1. Yes ___ 2. No ___ 3. Does not apply ___
D.	Do you ever have to stop for breath after walking about 100 yards (or after a few minutes) on the level?	1. Yes ___ 2. No ___ 3. Does not apply ___
E.	Are you too breathless to leave the house or breathless on dressing or climbing one flight of stairs?	1. Yes ___ 2. No ___ 3. Does not apply ___

TOBACCO SMOKING

9A.	Have you ever smoked cigarettes? (No means less than 20 packs of cigarettes or 12 oz. of tobacco in a lifetime or less than 1 cigarette a day for 1 year).	1. Yes ___ 2. No ___
	IF YES TO 39A	
B.	Do you now smoke cigarettes (as of one months ago)	1. Yes ___ 2. No ___ 3. Does not apply ___
C.	How old were you when you first started regular cigarette smoking?	Age in years ___ Does not apply ___
D.	If you have stopped smoking cigarettes completely, how old were you when you stopped?	Age stopped ___ Check if still smoking ___ Does not apply ___
E.	How many cigarettes do you smoke per day now?	Cigarettes per day ___ Does not apply ___
F.	On the average of the entire time you smoked, how many cigarettes did you smoke per day?	Cigarettes per day ___ Does not apply ___

G. Do or did you inhale the cigarette smoke?
1. Does not apply ___
2. Not at all ___
3. Slightly ___
4. Moderately ___
5. Deeply ___

40A. Have you ever smoked a pipe regularly? (Yes means more than 12 oz. of tobacco in a lifetime.)
1. Yes ___ 2. No ___

IF YES TO 40A:

FOR PERSONS WHO HAVE EVER SMOKED A PIPE

B. 1. How old were you when you started to smoke a pipe regularly?
Age ___

2. If you have stopped smoking a pipe completely, how old were you when you stopped?
Age stopped ___
Check if still smoking a pipe ___
Does not apply ___

C. On the average over the entire time you smoked a pipe, how much pipe tobacco did you smoke per week?
___ oz. per week (a standard pouch of tobacco contains 1 1/2 oz.)
___ Does not apply

D. How much pipe tobacco are you smoking now?
oz. per week ___
Not currently smoking a pipe ___

E. Do you or did you inhale the pipe smoke?
1. Never smoked ___
2. Not at all ___
3. Slightly ___
4. Moderately ___
5. Deeply ___

41A. Have you ever smoked cigars regularly? (Yes means more than 1 cigar a week for a year)
1. Yes ___ 2. No ___

IF YES TO 41A

FOR PERSONS WHO HAVE EVER SMOKED CIGARS

B. 1. How old were you when you started smoking cigars regularly?
Age ___

2. If you have stopped smoking cigars completely, how old were you when you stopped?
Age stopped ___
Check if still smoking cigars ___
Does not apply ___

C. On the average over the entire time you smoked cigars, how many cigars did you smoke per week?
Cigars per week ___
Does not apply ___

D.	How many cigars are you smoking per week now?	Cigars per week	___
		Check if not smoking cigars currently	___
E.	Do or did you inhale the cigar smoke?	1. Never smoked	___
		2. Not at all	___
		3. Slightly	___
		4. Moderately	___
		5. Deeply	___

Signature ______________________________ Date ______________

Part 2
PERIODIC MEDICAL QUESTIONNAIRE

1. NAME ______________________________

2. SOCIAL SECURITY # ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
1 2 3 4 5 6 7 8 9

3. CLOCK NUMBER ___ ___ ___ ___ ___ ___ ___
10 11 12 13 14 15

4. PRESENT OCCUPATION ______________________

5. PLANT ______________________

6. ADDRESS ______________________

7. ______________________
(Zip Code)

8. TELEPHONE NUMBER ______________________

9. INTERVIEWER ______________________

10. DATE ______________________ ___ ___ ___ ___ ___ ___ ___
16 17 18 19 20 21

11. What is your marital status?
1. Single ___
2. Married ___
3. Widowed ___
4. Separated/ Divorced ___

12. OCCUPATIONAL HISTORY

12A. In the past year, did you work full time (30 hours per week or more) for 6 months or more? 1. Yes ___ 2. No ___

12B. IF YES TO 12A:

In the past year, did you work in a dusty job? 1. Yes ___ 2. No ___ 3. Does not apply ___

12C. Was dust exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

12D. In the past year, were you exposed to gas or chemical fumes in your work? 1. Yes ___ 2. No ___

12E. Was exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

12F. In the past year, what was your:
1. Job/occupation? ______________________
2. Position/job title? ______________________

13. RECENT MEDICAL HISTORY

13A. Do you consider yourself to be in good health? Yes ____ No ____

If NO, state reason ________________________________

13B. In the past year, have you developed:

	Yes	No
Epilepsy?	___	___
Rheumatic fever?	___	___
Kidney disease?	___	___
Bladder disease?	___	___
Diabetes?	___	___
Jaundice?	___	___
Cancer?	___	___

4. CHEST COLDS AND CHEST ILLNESSES

4A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time)

1. Yes ___ No ___
3. Don't get colds ___

5A. During the past year, have you had any chest illnesses that have kept you off work, indoors at home, or in bed?

1. Yes ___ 2. No ___
3. Does not apply ___

IF YES TO 15A:

5B. Did you produce phlegm with any of these chest illnesses

1. Yes ___ 2. No ___
3. Does not apply ___

C. In the past year, how many such illnesses with (increased) phlegm did you have which lasted a week or more?

Number of illnesses ___
No such illnesses ___

. RESPIRATORY SYSTEM

In the past year have you had:

	Yes or No	Further Comment on Positive Answers
Asthma	________	
Bronchitis	________	
Hay Fever	________	
Other Allergies	________	

	Yes or No	Further Comment on Positive Answers
Pneumonia	________	
Tuberculosis	________	
Chest Surgery	________	
Other Lung Problems	________	
Heart Disease	________	
Do you have:		
Frequent colds	________	
Chronic cough	________	
Shortness of breath when walking or climbing one flight of stairs	________	
Do you:		
Wheeze	________	
Cough up phlegm	________	
Smoke cigarettes	________	Packs per day __ How many years __

Date ____________________ Signature ________________________________

APPENDIX E TO § 763.121—INTERPRETATION AND CLASSIFICATION OF CHEST ROENTGENOGRAMS—MANDATORY

(a) Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted classification system nd recorded on an interpretation form following the format of the CDC/NIOSH (M) .8 form. As a minimum, the content within he boldlines of this form (items 1 through) shall be included. This form is not to be ubmitted to NIOSH.

(b) Roentgenograms shall be interpreted nd classified only by a B-reader, a board eligible/certified radiologist, or an experienced physician with known expertise in neumoconioses.

(c) All interpreters, whenever interpreting hest roentgenograms made under this sec- on, shall have immediately available for eference a complete set of the ILO-U/C nternational Classification of Radiographs r Pneumoconioses, 1980.

2 FR 5623, Feb. 25, 1987; 52 FR 10817, ar. 30, 1987; 53 FR 1022, Jan. 15, 1988]

763.122 Exclusions for States.

(a) The States of Idaho, Kansas, klahoma, and Wisconsin have 6 onths or such other reasonable time suggested by the particular State d approved by the Director of the ffice of Toxic Substances to make eir regulations comparable to or ore stringent than this part, and to bmit their regulations to EPA's ffice of Toxic Substances for review. in such reasonable time after March , 1987, any of these States have not revised their regulations and sub- tted them to EPA, State and local vernment employees in such States all be covered by the requirements this part.

b) Any other State that wishes to excluded from this rule shall send a py of a regulation which it considers be comparable to or more stringent an this part to EPA's Office of xic Substances for review. EPA will iew the regulation and tentatively ermine whether the regulation is nparable to or more stringent than s part. If EPA makes a positive ten- ive determination, EPA will propose amendment to this rule excluding t State from coverage. Interested sons may comment on the pro- ed exclusion during the period for lic comment. After considering any comments, EPA may promulgate the final amendment to the rule.

§ 763.124 Reporting.

(a) Employers subject to this rule must report to the Regional Asbestos Coordinator for the EPA Region in which the asbestos abatement project is located at least 10 days before they begin any asbestos abatement project, except one that involves less than either 3 linear feet or 3 square feet of friable asbestos material, and an emergency project. Employers must report any emergency project covered by this rule as soon as possible but in no case more than 48 hours after the project begins. A list of the EPA Regional Offices is given under § 1.7(b) of this chapter.

(b) The report must include:

(1) The employer's name and address.

(2) The location, including street address, of the asbestos abatement project.

(3) The scheduled starting and completion dates for the asbestos abatement project.

(c) If a report is mailed to EPA, the report must be postmarked at least 10 days before the asbestos abatement project begins unless the report is for an emergency project. In such a case, the report must be postmarked as soon as possible but in no case more than 48 hours after the project begins.

(d) Employers do not have to report under this section if they submit a notice to EPA under the National Emission Standard for Asbestos, § 61.146 of this chapter, at least 10 days before they begin the asbestos abatement project and that notice clearly indicates that employees covered by this rule will perform some or all of the asbestos abatement work.

(Approved by the Office of Management and Budget under control number 2070-0072)

§ 763.125 Enforcement.

(a) Failure to comply with any provision of this part is a violation of section 15 of the Act (15 U.S.C. 2614).

(b) Failure or refusal to establish and maintain records or to permit access to or copying of records, as required by the Act, is a violation of section 15 of the Act (15 U.S.C. 2614).

(c) Failure or refusal to permit entry or inspection as required by section 11 of the Act (15 U.S.C. 2610) is a violation of section 15 of the Act (15 U.S.C. 2614).

(d) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation.

(e) EPA may seek to enjoin an asbestos abatement project in violation of this part, or take other actions under the authority of section 7 or 17 of the Act (15 U.S.C. 2606 or 2616).

§ 763.126 Inspections.

EPA will conduct inspections under section 11 of the Act (15 U.S.C. 2610) to ensure compliance with this part.

Subpart H—[Reserved]

Subpart I—Prohibition of the Manufacture, Importation, Processing, and Distribution in Commerce of Certain Asbestos-Containing Products; Labeling Requirements

SOURCE: 54 FR 29507, July 12, 1989, unless otherwise noted.

§ 763.160 Scope.

This subpart prohibits the manufacture, importation, processing, and distribution in commerce of the asbestos-containing products identified and at the dates indicated in §§ 763.165, 763.167, and 763.169. This subpart requires that products subject to this rule's bans, but not yet subject to a ban on distribution in commerce, be labeled. This subpart also includes general exemptions and procedures for requesting exemptions from the provisions of this subpart.

§ 763.163 Definitions.

For purposes of this subpart:

"Acetylene cylinder filler"means an asbestos-containing product which is intended for use as a filler for acetylene cylinders.

"Act" means the Toxic Substances Control Act, 15 U.S.C. 2601 *et seq.*

"Aftermarket part" means any part offered for sale for installation in or
on a motor vehicle after such veh
has left the manufacturer's prod
tion line.

"Agency" means the United Sta
Environmental Protection Agency.

"Arc chute" means an asbestos-c
taining product that acts as a chute
guidance device and is intended
guide electric arcs in applications su
as motor starter units in electric g
erating plants.

"Asbestos" means the asbestifo
varieties of: chrysotile (serpentir
crocidolite (riebeckite); amosite (cu
mingtonite-grunerite); tremolite; an
ophyllite; and actinolite.

"Asbestos-cement (A/C) corrugat
sheet" means an asbestos-containi
product made of cement and in t
form of a corrugated sheet used a
non-flat-surfaced reinforcing or in
lating material. Major applications
this product include: building siding
roofing; linings for waterways; a
components in cooling towers.

"Asbestos-cement (A/C) flat shee
means an asbestos-containing produ
made of cement and in the form of
flat sheet used primarily as a flat-su
faced reinforcing or insulating mate
al. Major applications of this produ
include: wall linings; partitions; sof
material; electrical barrier boards; b
bar run separators; reactance coil pa
titions; laboratory work surfaces; a
components of vaults, ovens, safes, a
broilers.

"Asbestos-cement (A/C) pipe" mea
an asbestos-containing product ma
of cement and intended for use as pi
or fittings for joining pipe. Major a
plications of this product include: pi
used for transmitting water or sewag
conduit pipe for protection of utili
or telephone cable; and pipes used f
air ducts.

"Asbestos-cement (A/C) shingl
means an asbestos-containing produ
made of cement and intended for u
as a siding, roofing, or constructio
shingle serving the purpose of cove
ing and insulating the surface of buil
ing walls and roofs.

"Asbestos clothing" means an asbe
tos-containing product designed to b
worn by persons.

"Asbestos-containing product
means any product to which asbesto
is deliberately added in any concentr

tion or which contains more than 1.0 percent asbestos by weight or area.

"Asbestos diaphragm" means an asbestos-containing product that is made of paper and intended for use as a filter in the production of chlorine and other chemicals, and which acts as a mechanical barrier between the cathodic and anodic chambers of an electrolytic cell.

"Automated transmission component" means an asbestos-containing product used as a friction material in vehicular automatic transmissions.

"Battery separator" means an asbestos-containing product used as an insulator or separator between the negative and positive terminals in batteries and fuel cells.

"Beater-add gasket" means an asbestos-containing product that is made of paper intended for use as a gasket, and designed to prevent leakage of liquids, solids, or gases and to seal the space between two sections of a component in circumstances not involving rotary, reciprocating, and helical motions. Major applications of beater-add gaskets include: gaskets for internal combustion engines; carburetors; exhaust manifolds; compressors; reactors; distillation columns; and other apparatus.

"Brake block" means an asbestos-containing product intended for use as a friction material in drum brake systems for vehicles rated at 26,001 pounds gross vehicle weight rating (GVWR) or more.

"Chemical substance," has the same meaning as in section 3 of the Act.

"Clutch facing" means an asbestos-containing product intended for use as a friction material or lining in the clutch mechanisms or manual transmission vehicles.

"Commerce" has the same meaning as in section 3 of the Act.

"Commercial and industrial friction product" means an asbestos-containing product, which is either molded or woven, intended for use as a friction material in braking and gear changing components in industrial and commercial machinery and consumer appliances. Major applications of this product include: hand brakes; segments; blocks; and other components used as brake linings, rings and clutches in industrial and commercial machinery and consumer appliances.

"Commercial paper" means an asbestos-containing product which is made of paper intended for use as general insulation paper or muffler paper. Major applications of commercial papers are insulation against fire, heat transfer, and corrosion in circumstances that require a thin, but durable, barrier.

"Corrugated paper" means an asbestos-containing product made of corrugated paper, which is often cemented to a flat backing, may be laminated with foils or other materials, and has a corrugated surface. Major applications of asbestos corrugated paper include: thermal insulation for pipe coverings; block insulation; panel insulation in elevators; insulation in appliances; and insulation in low-pressure steam, hot water, and process lines.

"Customs territory of the United States" means the 50 States, Puerto Rico, and the District of Columbia.

"Disc brake pad for heavy-weight vehicles" means an asbestos-containing product intended for use as a friction material in disc brake systems for vehicles rated at 26,001 pounds gross vehicle weight rating (GVWR) or more.

"Disc brake pad for light- and medium-weight vehicles" means an asbestos-containing product intended for use as a friction material in disc brake systems for vehicles rated at less than 26,001 pounds gross vehicle weight rating (GVWR).

"Distribute in commerce" has the same meaning as in section 3 of the Act, but the term does not include actions taken with respect to an asbestos-containing product (to sell, resale, deliver, or hold) in connection with the end use of the product by persons who are users (persons who use the product for its intended purpose after it is manufactured or processed). The term also does not include distribution by manufacturers, importers, and processors, and other persons solely for purposes of disposal of an asbestos-containing product.

"Drum brake lining" means any asbestos-containing product intended for use as a friction material in drum brake systems for vehicles rated at less than 26,001 pounds gross vehicle weight rating (GVWR).

"Flooring felt" means an asbestos-containing product which is made of paper felt intended for use as an underlayer for floor coverings, or to be bonded to the underside of vinyl sheet flooring.

"Gross vehicle weight rating (GVWR)" means the value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

"High-grade electrical paper" means an asbestos-containing product that is made of paper and consisting of asbestos fibers and high-temperature resistant organic binders and used in or with electrical devices for purposes of insulation or protection. Major applications of this product include insulation for high-temperature, low voltage applications such as in motors, generators, transformers, switch gears, and other heavy electrical apparatus.

"Import" means to bring into the customs territory of the United States, except for: (1) Shipment through the customs territory of the United States for export without any use, processing, or disposal within the customs territory of the United States; or (2) entering the customs territory of the United States as a component of a product during normal personal or business activities involving use of the product.

"Importer" means anyone who imports a chemical substance, including a chemical substance as part of a mixture or article, into the customs territory of the United States. "Importer" includes the person primarily liable for the payment of any duties on the merchandise or an authorized agent acting on his or her behalf. The term includes as appropriate:

(1) The consignee.

(2) The importer of record.

(3) The actual owner if an actual owner's declaration and superseding bond has been filed in accordance with 19 CFR 141.20.

(4) The transferee, if the right to withdraw merchandise in a bonded warehouse has been transferred in accordance with subpart C of 19 CFR Part 144.

"Manufacture" means to produc
manufacture in the United States.
"Manufacturer" means a person
produces or manufactures in
United States.

"Millboard" means an asbestos-
taining product made of paper
similar in consistency to cardbo
produced in sections rather than a
continuous sheet. Major applicati
of this product include: thermal
tection for large circuit breakers;
riers from flame or heat; linings
floors, partitions, and fire doors;
ings for stoves and heaters; gask
table pads; trough liners; covers
operations involving molten me
and stove mats.

"Missile liner" means an asbest
containing product used as a liner
coating the interior surfaces of roc
motors.

"Model year" means the manuf
turer's annual production per
which includes January 1 of such
endar year, provided that if the ma
facturer has no annual producti
period, the term "model year" sh
mean the calendar year.

"New uses of asbestos" means co
mercial uses of asbestos not identifi
in § 763.165 the manufacture, impor
tion or processing of which would
initiated for the first time aft
August 25, 1989. The following pro
ucts are also not new uses of asbest
acetylene cylinders, arc chutes, asb
tos diaphragms, battery separato
high grade electrical paper, miss
liner, packing, reinforced plastic, se
ant tape, specialty industrial gaske
and textiles.

"Non-roof coating" means an asbe
tos-containing product intended f
use as a coating, cement, adhesive,
sealant and not intended for use
roofs. Major applications of this pro
uct include: liquid sealants; semi-liqu
glazing, caulking and patching com
pounds; asphalt-based compound
epoxy adhesives; butyl rubber se
lants; vehicle undercoatings; vinyl se
lants; and compounds containing a
bestos fibers that are used for bon
ing, weather proofing, sound deade
ing, sealing, coating; and other suc
applications.

"Original equipment market part
means any part installed in or on

motor vehicle in the manufacturer's production line.

"Packing" means an asbestos-containing product intended for use as a mechanical seal in circumstances involving rotary, reciprocating, and helical motions, and which are intended to restrict fluid or gas leakage between moving and stationary surfaces. Major applications of this product include: seals in pumps; seals in valves; seals in compressors; seals in mixers; seals in swing joints; and seals in hydraulic cylinders.

"Person" means any natural person, firm, company, corporation, joint-venture, partnership, sole proprietorship, association, or any other business entity; any State or political subdivision thereof, or any municipality; any interstate body and any department, agency, or instrumentality of the Federal Government.

"Pipeline wrap" means an asbestos-containing product made of paper felt intended for use in wrapping or coating pipes for insulation purposes.

"Process" has the same meaning as in section 3 of the Act.

"Processor" has the same meaning as in section 3 of the Act.

"Reinforced plastic" means an asbestos-containing product made of plastic. Major applications of this product include: electro-mechanical parts in the automotive and appliance industries; components of printing plates; and as high-performance plastics in the aerospace industry.

"Rollboard" means an asbestos-containing product made of paper that is produced in a continuous sheet, is flexible, and is rolled to achieve a desired thickness. Asbestos rollboard consists of two sheets of asbestos paper laminated together. Major applications of this product include: office partitioning; garage paneling; linings for stoves and electric switch boxes; and fire-proofing agent for security boxes, safes, and files.

"Roof coating" means an asbestos-containing product intended for use as a coating, cement, adhesive, or sealant on roofs. Major applications of this product include: waterproofing; weather resistance; sealing; repair; and surface rejuvenation.

"Roofing felt" means an asbestos-containing product that is made of paper felt intended for use on building roofs as a covering or underlayer for other roof coverings.

"Sealant tape" means an asbestos-containing product which is initially a semi-liquid mixture of butyl rubber and asbestos, but which solidfies when exposed to air, and which is intended for use as a sealing agent. Major applications of this product include: sealants for building and automotive windows, sealants for aerospace equipment components, and sealants for insulated glass.

"Sheet gasket" means either (1) an asbestos-containing product consisting of asbestos and elastomeric or other binders rolled in homogeneous sheets at some point in its manufacture and intended for use as a gasket, or (2) any asbestos-containing product made from braided or twisted rope, slit or woven tape, yarn, or other textile products intended for use as a gasket. Sheet gaskets are used to seal the space between two sections of a component and thereby prevent leakage in such applications as: exhaust, cylinder head, and intake manifolds; pipe flanges; autoclaves; vulcanizers; pressure vessels; cooling towers; turbochargers; and gear cases. This category includes flange, spiralwound, tadpole, manhole, handhole, door, and other gaskets or seals.

"Specialty industrial gaskets" means sheet or beater-add gaskets designed for industrial uses in either (1) environments where temperatures are 750 degrees Fahrenheit or greater, or (2) corrosive environments. An industrial gasket is one designed for use in an article which is not a "consumer product" within the meaning of the Consumer Product Safety Act (CPSA), 15 U.S.C. 2052, or for use in a "motor vehicle" or "motor vehicle equipment" within the meaning of the National Traffic and Motor Vehicle Safety Act of 1966, as amended, 15 U.S.C. 1381. A corrosive environment is one in which the gasket is exposed to concentrated (pH less than 2), highly oxidizing mineral acids (e.g., sulfuric, nitric, or chromic acid) at temperatures above ambient.

"Specialty paper" means an asbestos-containing product that is made of paper intended for use as filters for beverages or other fluids or as paper fill for cooling towers. Cooling tower fill consists of asbestos paper that is used as a cooling agent for liquids from industrial processes and air conditioning systems.

"State" has the same meaning as in section 3 of the Act.

"Stock-on-hand" means the products which are in the possession, direction, or control of a person and are intended for distribution in commerce.

"Textiles" means an asbestos-containing product such as: yarn; thread; wick; cord; braided and twisted rope; braided and woven tubing; mat; roving; cloth; slit and woven tape; lap; felt; and other bonded or non-woven fabrics.

"United States" has the same meaning as in section 3 of the Act.

"Vinyl-asbestos floor tile" means an asbestos-containing product composed of vinyl resins and used as floor tile.

[54 FR 29507, July 12, 1989, as amended at 54 FR 46897, Nov. 8, 1989]

§ 763.165 Manufacture and importation prohibitions.

(a) After August 27, 1990, no person shall manufacture or import the following asbestos-containing products, either for use in the United States or for export: A/C corrugated sheet, A/C flat sheet, asbestos clothing, flooring felt, pipeline wrap, roofing felt, vinyl/asbestos floor tile, and new uses of asbestos.

(b) After August 25, 1993, no person shall manufacture or import the following asbestos-containing products, either for use in the United States or for export: automatic transmission components, clutch facings, commercial and industrial asbestos friction products, and sheet and beater-add gaskets (except specialty industrial gaskets).

(c) After August 25, 1993, no person shall manufacture or import, including as part of a motor vehicle, asbestos-containing disc brake pads for light-, medium-, and heavy-weight vehicles, and drum brake linings for the following uses in the United States or for export:

(1) As original equipment in 199
later model year motor vehicles, or

(2) As aftermarket replacem
parts in brake systems designed
use with non-asbestos replacem
parts.

(d) After August 26, 1996, no per
shall manufacture or import the
lowing asbestos-containing produ
either for use in the United State
for export: disc brake pads for us
light-, medium-, and heavy-weight
hicles and drum brake linings ma
factured, imported, or marketed
use as aftermarket replacement p
in brake systems designed for use
asbestos-containing friction produ
A/C pipe, A/C shingle, brake blo
commercial paper, corrugated pa
millboard, non-roofing coatings,
board, roof coatings, and speci
paper.

(e) The import prohibitions of
subpart do not prohibit:

(1) The import into the customs
ritory of the United States of produ
imported solely for shipment outs
the customs territory of the Uni
States, unless further repackaging
processing of the product is perform
in the United States; or

(2) Activities involving purchases
acquisitions of small quantities
products made outside the custo
territory of the United States for
sonal use in the United States.

§ 763.167 Processing prohibitions.

(a) After August 27, 1990, no pers
shall process for any use, either in
United States or for export, any of
asbestos-containing products listed
§ 763.165(a).

(b) After August 25, 1993, no pers
shall process for any use, either in
United States or for export, any of
asbestos-containing products listed
§ 763.165 (b) and (c).

(c) After August 26, 1996, no pers
shall process for any use, either in
United States or for export, any of
asbestos-containing products listed
§ 763.165(d).

§ 763.169 Distribution in commerce pro bitions.

(a) After August 25, 1992, no pers
shall distribute in commerce, eith

for use in the United States or for export, any of the asbestos-containing products listed at § 763.165(a).

(b) After August 25, 1994, no person shall distribute in commerce, either for use in the United States or for export, any of the asbestos-containing products listed at § 763.165 (b) and (c).

(c) After August 25, 1997, no person shall distribute in commerce, either for use in the United States or for export, any of the asbestos-containing products listed at § 763.165(d).

(d) A manufacturer, importer, processor, or any other person who is subject to a ban on distribution in commerce in paragraph (a), (b), or (c) of this section must, within 6 months of the effective date of the ban of a specific asbestos-containing product from distribution in commerce, dispose of all their remaining stock-on-hand of that product, by means that are in compliance with applicable local, State, and Federal restrictions which are current at that time.

§ 763.171 Labeling requirements.

(a) After August 27, 1990, manufacturers, importers, and processors of all asbestos-containing products that are identified in § 763.165(a) shall label the products as specified in this subpart at the time of manufacture, import, or processing. This requirement includes labeling all manufacturers', importers', and processors' stock-on-hand as of August 27, 1990.

(b) After August 25, 1992, manufacturers, importers, and processors of all asbestos-containing products that are identified in § 763.165(b) and (c), and disc brake pads for use in light-, medium-, and heavy-weight vehicles and drum brake linings manufactured, imported, or marketed for use as aftermarket replacement parts in brake systems designed for use with asbestos-containing friction products shall label the products as specified in this subpart at the time of manufacture, import, or processing. This requirement includes labeling all manufacturers', importers', and processors' stock-on-hand as of August 25, 1992.

(c) After August 25, 1995, manufacturers, importers, and processors of all asbestos-containing products that are identified in § 763.165(d), except disc brake pads for use in light-, medium-, and heavy-weight vehicles and drum brake linings manufactured, imported, or marketed for use as aftermarket replacement parts in brake systems designed for use with asbestos-containing friction products, shall label the products as specified in this subpart at the time of manufacture, import, or processing. This requirement includes labeling all manufacturers', importers', and processors' stock-on-hand as of August 25, 1995.

(d) The label shall be placed directly on the visible exterior of the wrappings and packaging in which the product is placed for sale, shipment, or storage. If the product has more than one layer of external wrapping or packaging, the label must be attached to the innermost layer adjacent to the product. If the innermost layer of product wrapping or packaging does not have a visible exterior surface larger than 5 square inches, either a tag meeting the requirements of paragraph (e) of this section must be securely attached to the product's innermost layer of product wrapping or packaging, or a label must be attached to the next outer layer of product packaging or wrapping. Any products that are distributed in commerce to someone other than the end user, shipped, or stored without packaging or wrapping must be labeled or tagged directly on a visible exterior surface of the product as described in paragraph (e) of this section.

(e)(1) Labels must be either printed directly on product packaging or in the form of a sticker or tag made of plastic, paper, metal, or other durable substances. Labels must be attached in such a manner that they cannot be removed without defacing or destroying them. Product labels shall appear as in paragraph (e)(2) of this section and consist of block letters and numerals of color that contrasts with the background of the label or tag. Labels shall be sufficiently durable to equal or exceed the life, including storage and disposal, of the product packaging or wrapping. The size of the label or tag must be at least 15.25 cm (6 inches) on each side. If the product packaging is too small to accommodate a label of this size, the label may be reduced in size proportionately to the size of the product packaging or wrapping down to a minimum 2.5 cm (1 inch) on each side if the product wrapping or packaging has a visible exterior surface larger than 5 square inches.

(2) Products subject to this subpart shall be labeled in English as follows:

NOTICE

This product contains *ASBESTOS*. The U.S. Environmental Protection Agency has banned the distribution in U.S. commerce of this product under section 6 of the Toxic Substances Control Act (15 U.S.C. 2605) as of (insert effective date of ban on distribution in commerce). Distribution of this product in commerce after this date and intentionally removing or tampering with this label are *violations of Federal law*.

(f) No one may intentionally remove, deface, cover, or otherwise obscure or tamper with a label or sticker that has been applied in compliance with this section, except when the product is used or disposed of.

§ 763.173 General exemptions.

(a) Persons who are subject to the prohibitions imposed by §§ 763.165, 763.167, or 763.169 may file an application for an exemption. Persons whose exemption applications are approved by the Agency may manufacture, import, process, or distribute in commerce the banned product as specified in the Agency's approval of the application. No applicant for an exemption may continue the banned activity that is the subject of an exemption application after the effective date of the ban unless the Agency has granted the exemption or the applicant receives an extension under paragraph (b)(8) or (9) of this section.

(b) Application filing dates. (1) Applications for products affected by the prohibitions under §§763.165(a) and 763.167(a) may be submitted after August 25, 1989. Complete applications received after that date, but before November 27, 1989, will be either granted or denied by the Agency prior to the effective date of the ban for the product. Applications received after November 27, 1989, will be either granted or denied by EPA as soon as is feasible.

(2) Applications for products affec ed by the ban under § 763.169(a) m not be submitted prior to February 2 1990. Complete applications receiv after that date, but before August 2 1991, will be either granted or deni by the Agency prior to the effecti date of the ban for the product. App cations received after August 26, 199 will be either granted or denied b EPA as soon as is feasible.

(3) Applications for products affec ed by the ban under §§ 763.165(b) (c) and 763.167(b) may not be submi ted prior to February 26, 1992. Con plete applications received after th date, but before August 25, 1992, w be either granted or denied by th Agency prior to the effective date the ban for the product. Applicatio received after August 25, 1992, will b either granted or denied by EPA soon as is feasible.

(4) Applications for products affec ed by the ban under § 763.169(b) ma not be submitted prior to February 2 1993. Complete applications receive after that date, but before August 2 1993, will be either granted or denie by the Agency prior to the effectiv date of the ban for the product. Appli cations received after August 25, 199 will be either granted or denied b EPA as soon as is feasible.

(5) Applications for products affect ed by the ban under §§ 763.165(d) an 763.167(c) may not be submitted prio to February 27, 1995. Complete appli cations received after that date, bu before August 25, 1995, will be eithe granted or denied by the Agency prio to the effective date of the ban for the product. Applications received afte August 25, 1995, will be either granted or denied by EPA as soon as is feasible.

(6) Applications for products affected by the ban under § 763.169(c) may not be submitted prior to February 26, 1996. Complete applications received after that date, but before August 26, 1996, will be either granted or denied by the Agency prior to the effective date of the ban for the product. Applications received after August 26, 1996, will be either granted or denied by EPA as soon as is feasible.

(7) The Agency will consider an application for an exemption from a ban

under § 763.169 for a product at the same time the applicant submits an application for an exemption from a ban under § 763.165 or § 763.167 for that product. EPA will grant an exemption at that time from a ban under § 763.169 if the Agency determines it appropriate to do so.

(8) If the Agency denies an application less than 30 days before the effective date of a ban for a product, the applicant can continue the activity for 30 days after receipt of the denial from the Agency.

(9) If the Agency fails to meet the deadlines stated in paragraphs (b)(1) through (6) of this section for granting or denying a complete application in instances in which the deadline is before the effective date of the ban to which the application applies, the applicant will be granted an extension of 1 year from the Agency's deadline date. During this extension period the applicant may continue the activity that is the subject of the exemption application. The Agency will either grant or deny the application during the extension period. The extension period will terminate either on the date the Agency grants the application or 30 days after the applicant receives the Agency's denial of the application. However, no extension will be granted if the Agency is scheduled to grant or deny an application at some date after the effective date of the ban, pursuant to the deadlines stated in paragraphs (b)(1) through (6) of this section.

(c) Where to file. All applications must be submitted to the following location: TSCA Document Processing Center (TS-790), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460, ATTENTION: Asbestos Exemption.

(d) Content of application and criteria for decisionmaking.

(1) Content of application. Each application must contain the following:

(i) Name, address, and telephone number of the applicant.

(ii) Description of the manufacturing, import, processing, and/or distribution in commerce activity for which an exemption is requested, including a description of the asbestos-containing product to be manufactured, imported, processed, or distributed in commerce.

(iii) Identification of locations at which the exempted activity would take place.

(iv) Length of time requested for exemption (maximum length of an exemption is 4 years).

(v) Estimated amount of asbestos to be used in the activity that is the subject of the exemption application.

(vi) Data demonstrating the exposure level over the life cycle of the product that is the subject of the application.

(vii) Data concerning:

(A) The extent to which non-asbestos substitutes for the product that is the subject of the application fall significantly short in performance under necessary product standards or requirements, including laws or ordinances mandating product safety standards.

(B) The costs of non-asbestos substitutes relative to the costs of the asbestos-containing product and, in the case in which the product is a component of another product, the effect on the cost of the end use product of using the substitute component.

(C) The extent to which the product or use serves a high-valued use.

(viii) Evidence of demonstrable good faith attempts by the applicant to develop and use a non-asbestos substance or product which may be substituted for the asbestos-containing product or the asbestos in the product or use that is the subject to the application.

(ix) Evidence, in addition to that provided in the other information required with the application, showing that the continued manufacture, importation, processing, distribution in commerce, and use, as applicable, of the product will not present an unreasonable risk of injury to human health.

(2) Criteria for decision (existing products). After considering all the information provided by an applicant under paragraphs (d)(1) and (e) of this section, and any other information available to EPA, EPA will grant an exemption from the prohibitions in §§ 763.165, 763.167, or 763.169 for an applicant's asbestos-containing prod-

uct only if EPA determines both of the following:

(i) The applicant has made good faith attempts to develop and use a non-asbestos substance or product which may be substituted for the asbestos-containing product or the asbestos in the product or use, and those attempts have failed to produce a substitute or a substitute that results in a product that can be economically produced.

(ii) Continued manufacturing, processing, distribution in commerce, and use, as applicable, of the product will not present an unreasonable risk of injury to human health.

(3) Criteria for decision (new products). Requests to develop and use an asbestos substance or product will be treated as a petition pursuant to Section 21 of TSCA.

(e) The Agency reserves the right to request further information from an exemption applicant if necessary to complete the Agency's evaluation of an application.

(f) Upon receipt of a complete application, the Agency will issue a notice in the FEDERAL REGISTER announcing its receipt and invite public comments on the merits of the application.

(g) If the application does not include all of the information required in paragraph (d) of this section, the Agency will return it to the applicant as incomplete and any resubmission of the application will be considered a new application for purposes of the availability of any extension period. If the application is substantially inadequate to allow the Agency to make a reasoned judgment on any of the information required in paragraph (d) of this section and the Agency chooses to request additional information from the applicant, the Agency may also determine that an extension period provided for in paragraph (b)(7) of this section is unavailable to the applicant.

(h) When denying an application, the Agency will notify the applicant by registered mail of its decision and rationale. Whenever possible, the Agency will send this letter prior to the appropriate ban. This letter will be considered a final Agency action for purposes of judicial review. A notice announcing the Agency's denial of the application will be published in th FEDERAL REGISTER.

(i) If the Agency proposes to approve an exemption, it will issue notice in the FEDERAL REGISTER announcing this intent and invite publi comments. If, after considering any timely comments received, the Agency approves an exemption, its decision will be published in the FEDERAL REGISTER. This notice will be considered final Agency action for purposes of judicial review.

(j) The length of an exemption period will be specified by the agency when it approves the exemption. To extend an exemption period beyond the period stipulated by EPA, applicants must submit a new application to the Agency, following the application procedures described in this section. Applications may not be submitted prior to 15 months before the expiration of the exemption period, unless stated otherwise in the notice granting the exemption. Applications received between 15 months and 1 year before the end of the exemption period will be either granted or denied by the Agency before the end of the exemption period. Applications received after the date 1 year prior to the end of the exemption period will be either granted or denied by the Agency as soon as is feasible. Applicants may not continue the activity that is the subject of the renewal application after the date of the end of the exemption period.

[54 FR 29507, July 12, 1989; 54 FR 37531, Sept. 11, 1989, as amended at 54 FR 46898, Nov. 8, 1989]

§ 763.175 Enforcement.

(a) Failure to comply with any provision of this subpart is a violation of section 15 of the Act (15 U.S.C. 2614).

(b) Failure or refusal to establish and maintain records, or to permit access to or copying of records as required by section 11 of the Act (15 U.S.C. 2610) is a violation of section 15 of the Act (15 U.S.C. 2614).

(c) Failure or refusal to permit entry or inspection as required by section 11 of the Act (15 U.S.C. 2610) is a violation of section 15 of the Act (15 U.S.C. 2614).

(d) Violators may be subject to the civil and criminal penalties in section 16 of the Act (15 U.S.C. 2615) for each violation.

(e) The Agency may seek to enjoin the manufacture, import, processing, or distribution in commerce of asbestos-containing products in violation of this subpart, or act to seize any asbestos-containing products manufactured, imported, processed, or distributed in commerce in violation of this subpart, or take any other actions under the authority of section 7 or 17 of the act (15 U.S.C. 2606 or 2616) that are appropriate.

§ 763.176 Inspections.

The Agency will conduct inspections under section 11 of the Act (15 U.S.C. 2610) to ensure compliance with this subpart.

§ 763.178 Recordkeeping.

(a) *Inventory.* (1) Each person who is subject to the prohibitions imposed by §§ 763.165 and 763.167 must perform an inventory of the stock-on-hand of each banned product as of the effective date of the ban for that product for the applicable activity.

(2) The inventory shall be in writing and shall include the type of product, the number of product units currently in the stock-on-hand of the person performing the inventory, and the location of the stock.

(3) Results of the inventory for a banned product must be maintained by the person for 3 years after the effective date of the § 763.165 or § 763.167 ban on the product.

(b) *Records.* (1) Each person whose activities are subject to the bans imposed by §§ 763.165, 763.167, and 763.169 for a product must, between the effective date of the § 763.165 or § 763.167 ban on the product and the § 763.169 ban on the product, keep records of all commercial transactions regarding the product, including the dates of purchases and sales and the quantities purchased or sold. These records must be maintained for 3 years after the effective date of the § 763.169 ban for the product.

(2) Each person who is subject to the requirements of § 763.171 must, for each product required to be labeled, maintain a copy of the label used in compliance with § 763.171. These records must be maintained for 3 years after the effective date of the ban on distribution in commerce for the product for which the § 763.171 requirements apply.

(Approved by the Office of Management and Budget under control number 2070-0082)

[54 FR 29507, July 12, 1989, as amended by 54 FR 46898, Nov. 8, 1989]

§ 763.179 Confidential business information claims.

(a) Applicants for exemptions under § 763.173 may assert a Confidential Business Information (CBI) claim for information in an exemption application or supplement submitted to the Agency under this subpart only if the claim is asserted in accordance with this section, and release of the information would reveal trade secrets or confidential commercial or financial information, as provided in section 14(a) of the Act. Information covered by a CBI claim will be treated in accordance with the procedures set forth in 40 CFR Part 2, subpart B. The Agency will place all information not claimed as CBI in the manner described in this section in a public file without further notice to the applicant.

(b) Applicants may assert CBI claims only at the time they submit a completed exemption application and only in the specified manner. If no such claim accompanies the information when it is received by the Agency, the information may be made available to the public without further notice to the applicant. Submitters that claim information as business confidential must do so by writing the word "Confidential" at the top of the page on which the information appears and by underlining, circling, or placing brackets ([ ]) around the information claimed CBI.

(c) Applicants who assert a CBI claim for submitted information must provide the Agency with two copies of their exemption application. The first copy must be complete and contain all information being claimed as CBI. The second copy must contain only information not claimed as CBI. The Agency will place the second copy of the submission in a public file. Failure to furnish a second copy of the submission when information is claimed as CBI in the first copy will be considered a presumptive waiver of the claim of confidentiality. The Agency will notify the applicant by certified mail that a finding of a presumptive waiver of the claim of confidentiality has been made. The applicant has 30 days from the date of receipt of notification to submit the required second copy. Failure to submit the second copy will cause the Agency to place the first copy in a public file.

(d) Applicants must substantiate all claims of CBI at the time the applicant asserts the claim, i.e., when the exemption application or supplement is submitted, by responding to the questions in paragraph (e) of this section. Failure to provide substantiation of a claim at the time the applicant submits the application will result in a waiver of the CBI claim, and the information may be disclosed to the public without further notice to the applicant.

(e) Applicants who assert any CBI claims must substantiate all claims by providing detailed responses to the following:

(1) Is this information subject to a patent or patent application in the United States or elsewhere? If so, why is confidentiality necessary?

(2) For what period do you assert a claim of confidentiality? If the claim is to extend until a certain event or point in time, please indicate that event or time period. Explain why such information should remain confidential until such point.

(3) Has the information that you are claiming as confidential been disclosed to persons outside of your company? Will it be disclosed to such persons in the future? If so, what restrictions, if any, apply to use or further disclosure of the information?

(4) Briefly describe measures taken by your company to guard against undesired disclosure of the information you are claiming as confidential to others.

(5) Does the information claimed as confidential appear or is it referred to in advertising or promotional materials for the product or the resulting end product, safety data sheets or other similar materials for the product or the resulting end product, professional or trade publications, or any other media available to the public or to your competitors? If you answered yes, indicate where the information appears.

(6) If the Agency disclosed the information you are claiming as confidential to the public, how difficult would it be for the competitor to enter the market for your product? Consider in your answer such constraints as capital and marketing cost, specialized technical expertise, or unusual processes.

(7) Has the Agency, another Federal agency, or a Federal court made any confidentiality determination regarding this information? If so, provide copies of such determinations.

(8) How would your company's competitive position be harmed if the Agency disclosed this information? Why should such harm be considered substantial? Describe the causal relationship between the disclosure and harm.

(9) In light of section 14(b) of TSCA, if you have claimed information from a health and safety study as confidential, do you assert that disclosure of this information would disclose a process used in the manufacturing or processing of a product or information unrelated to the effects of asbestos on human health and the environment? If your answer is yes, explain.

PART 766—DIBENZO-PARA-DIOXINS/DIBENZOFURANS

Subpart A—General Provisions

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Authority: 15 U.S.C. 2603 and 2607.

Source: 52 FR 21437, June 5, 1987, unless otherwise noted.

Subpart A—General Provisions

§ 766.1 Scope and purpose.

(a) This part identifies requirements for testing under section 4 of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2603, to ascertain whether certain specified chemical substances may be contaminated with halogenated dibenzodioxins (HDDs)/dibenzofurans (HDFs) as defined in § 766.3, and requirements for reporting under section 8 of TSCA, 15 U.S.C. 2607.

(b) Section 766.35(b) requires manufacturers and processors of chemical substances identified in § 766.25 to submit to EPA:

(1) Any existing test data showing analysis of the chemical substances for concentrations of HDDs/HDFs, applicable protocols, and the results of the analysis for HDDs/HDFs, (2) allegations of significant adverse reactions to HDDs/HDFs, compiled in accordance with Part 717 of this chapter, and (3) health and safety studies on the HDDs/HDFs, in accordance with applicable provisions of Part 716 of this chapter.

(c) Section 766.35(a) requires manufacturers and, under certain circumstances, processors of chemical substances identified in § 766.25 to submit letters of intent to test and protocols for the analysis of the chemical substances for the presence of HDDs/HDFs. Section 766.20 requires these manufacturers and processors to test their chemical substances for the presence of HDDs/HDFs. Any submissions must be in accordance with the EPA Procedures Governing Testing Consent Agreements and Test Rules contained in Part 790 of this chapter and any modifications to such procedures contained in this part.

(d) Section 766.32 specifies conditions under which persons required to test may request an exclusion or waiver from testing.

(e) Deadlines for submission to EPA of protocols, reports, studies, and test results are specified in Part 790, subpart C and § 766.35.

(f) Sections 766.10, 766.12, 766.14, 766.16, and 766.18 prescribe analytical methods required; § 766.27 prescribes target levels of quantitation (LOQ) for each congener for which quantitation is required.

(g) If results of existing tests or tests performed under this part indicate the presence of HDDs/HDFs in the identified chemical substance above the LOQ specified in § 766.27, § 766.35(c) requires the following additional reporting on the specified chemicals: production, process, use, exposure and disposal data under section 8(a) of TSCA; health and safety studies under section 8(d) of TSCA; and reports of allegations of significant adverse reactions under section 8(c) of TSCA. In some cases, additional reporting may be required of manufacturers reporting no contamination of the identified chemical substances under § 766.35(c)(2).

(h) Section 766.38 requires manufacturers of chemical substances produced from chemical substances identified as possible precursors to HDD/HDF formation, to report on chemical substances produced from such precursors.

§ 766.2 Applicability and duration of this part.

(a) *Chemical substances subject to testing.* (1) This part is applicable to each person who, at any time during the duration of this part, manufactures (and/or imports), or processes, a chemical substance identified under § 766.25.

(2) The duration of this part for any testing requirement for any chemical substance is the period commencing with the effective date of this part to the end of the reimbursement period, as defined in § 766.3, for each chemical

substance. All reporting requirements for any chemical substance listed under § 766.25 shall be in effect for the same period as the testing requirement.

(b) *Precursor chemical substances.* (1) This part is applicable to each person who manufactures (and/or imports) a chemical substance from any precursor chemical substance identified in § 766.38.

(2) The requirement for precursor reporting under § 766.38 shall be in effect until three years after the effective date of this part.

(3) Small manufacturers are exempt from reporting process and reaction condition data on chemical substances made from precursor chemical substances listed under § 766.38.

§ 766.3 Definitions.

The definitions in section 3 of TSCA and the definitions of §§ 704.3, 716.3, 717.3, and 790.3 of this chapter also apply to this part.

"Congener" means any one particular member of a class of chemical substances. A specific congener is denoted by unique chemical structure, for example 2,3,7,8-tetrachlorodibenzofuran.

"Dibenzofuran" means any of a family of compounds which has as a nucleus a triple-ring structure consisting of two benzene rings connected through a pair of bridges between the benzene rings. The bridges are a carbon-carbon bridge and a carbon-oxygen-carbon bridge at both substitution positions.

"Dibenzo-p-dioxin" or "dioxin" means any of a family of compounds which has as a nucleus a triple-ring structure consisting of two benzene rings connected through a pair of oxygen atoms.

"Guidelines" means the Midwest Research Institute (MRI) publication *Guidelines for the Determination of Polyhalogenated Dioxins and Dibenzofurans in Commercial Products,* EPA contract No. 68-02-3938; MRI Project No. 8201-A(41), 1985.

"HDD" or "2,3,7,8-HDD" means any of the dibenzo-p-dioxins totally chlorinated or totally brominated at the following positions on the molecular structure: 2,3,7,8; 1,2,3,7,8; 1,2,3,4,7,8; 1,2,3,6,7,8; 1,2,3,7,8,9; and 1,2,3,4,7,8,9.

"HDF" or "2,3,7,8-HDF" means any of the dibenzofurans totally chlorinated or totally brominated at the following positions on the molecular structure: 2,3,7,8; 1,2,3,7,8; 2,3,4,7,8; 1,2,3,4,7,8; 1,2,3,6,7,8; 1,2,3,7,8,9; 2,3,4,6,7,8; 1,2,3,4,6,7,8; and 1,2,3,4,7,8,9.

"Homolog" means a group of isomers that have the same degree of halogenation. For example, the homologous class of tetrachlorodibenzo-p-dioxins consists of all dibenzo-p-dioxins containing four chlorine atoms. When the homologous classes discussed in this part are referred to, the following abbreviations for the prefix denoting the number of halogens are used:

tetra-, T (4 atoms)
penta-, Pe (5 atoms)
hexa-, Hx (6 atoms)
hepta-, Hp (7 atoms)

"HRGC" means high resolution gas chromatography.

"HRMS" means high resolution mass spectrometry.

"Level of quantitation" or "LOQ" means the lowest concentration at which HDDs/HDFs can be reproducibly measured in a specific chemical substance within specified confidence limits, as described in this part.

"Polybrominated dibenzofurans" refers to any member of a class of dibenzofurans with two to eight bromine substituents.

"Polybrominated dibenzo-p-dioxin" or "PBDD" means to any member of a class of dibenzo-p-dioxins with two to eight bromine substituents.

"Polychlorinated dibenzofuran" means any member of a class of dibenzofurans with two to eight chlorine substituents.

"Polychlorinated dibenzo-p-dioxin" or "PCDD" means any member of a class of dibenzo-p-dioxins with two to eight chlorine substituents.

"Polyhalogenated dibenzofuran" or "PHDF" means any member of a class of dibenzofurans containing two to eight chlorine, bromine, or a combination of chlorine and bromine substituents.

"Polyhalogenated dibenzo-p-dioxin" or "PHDD" means any member of a class of dibenzo-p-dioxins containing two to eight chlorine substituents or two to eight bromine substituents.

"Positive test result" means: (1) Any resolvable gas chromatographic peak for any 2,3,7,8-HDD or HDF which exceeds the LOQ listed under § 766.27 for that congener, or (2) exceeds LOQs approved by EPA under § 766.28.

"Precursor" means a chemical substance which is not contaminated due to the process conditions under which it is manufactured, but because of its molecular structure, and under favorable process conditions, it may cause or aid the formation of HDDs/HDFs in other chemicals in which it is used as a feedstock or intermediate.

"QA" means quality assurance.

"QC" means quality control.

"Reimbursement period" means the period that begins when the data from the last test to be completed under this part for a specific chemical substance listed in § 766.25 is submitted to EPA, and ends after an amount of time equal to that which had been required to develop that data or 5 years, whichever is later.

"TSCA" means the Toxic Substances Control Act, 15 U.S.C. 2601 *et seq.*

§ 766.5 Compliance.

Any person who fails or refuses to comply with any aspect of this part is in violation of section 15 of TSCA. Section 15(1) makes it unlawful for any person to fail or refuse to comply with any rule or order issued under section 4. Section 15(3) makes it unlawful for any person to fail or refuse to submit information required under this part. Section 16 provides that a violation of section 15 renders a person liable to the United States for a civil penalty and possible criminal prosecution. Under section 17 of TSCA, the district courts of the United States have jurisdiction to restrain any violation of section 15.

§ 766.7 Submission of information.

All information (including letters of intent, protocols, data, forms, studies, and allegations) submitted to EPA under this part must bear the applicable Code of Federal Regulations (CFR) section number (e.g., § 766.20) and must be addressed to: Document Control Office (TS-790), Office of Pesticides and Toxic Substances, Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

§ 766.10 Test standards.

Testing required under subpart B of this part must be performed using the protocols submitted to and reviewed by the EPA expert panel established under § 766.28. All new data, documentation, records, protocols, specimens, and reports generated as a result of testing under subpart B of this part must be fully developed and retained in accordance with Part 792 of this chapter. These items must be made available during an inspection or submitted to EPA upon request by EPA or its authorized representative. Laboratories conducting testing for submission to EPA in response to a test rule promulgated under section 4 of TSCA must adhere to the TSCA Good Laboratory Practices (GLPs) published in Part 792 of this chapter. Sponsors must notify the laboratory that the testing is being conducted pursuant to TSCA section 4. Sponsors are also responsible for ensuring that laboratories conducting the testing abide by the TSCA GLP standards. At the time test data are submitted, manufacturers must submit a certification to EPA that the laboratory performing the testing adhered to the TSCA GLPs.

§ 766.12 Testing guidelines.

Analytical test methods must be developed using methods equivalent to those described or reviewed in *Guidelines for the Determination of Polyhalogenated Dibenzo-p-dioxins and Dibenzofurans in Commercial Products.* Copies are available from the TSCA Assistance Office, (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460 (800-424-9065). Copies are also located in the public docket for this part (Docket No. OPTS-83002) and are available for inspection in the OPTS Reading Rm., NE-G004, 401 M St., SW., Washington, DC, from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays.

§ 766.14 Contents of protocols.

Protocols should include all parts of the *Quality Assurance Plan for Measurement of Brominated or Chlorinated Dibenzofurans and Dibenzodioxins*, as stated in the Guidelines. For each chemical substance and each process, the manufacturer must submit a statement of how many grades of the chemical substance it produces, a justification for selection of the specific grade of chemical substance for testing, specific plans for collection of samples from the process stream, naming the point of collection, the method of collecting the sample, and an estimate of how well the samples will represent the material to be characterized; a description of how control samples (blanks) and HDD/HDF-reinforced control samples, or isotopically labeled compounds (standards) and duplicate samples will be handled; a description of the chemical extraction and clean up procedures to be used; how extraction efficiency and measurement efficiency will be established; and a description of instrument hardware and operating conditions, including type and source of columns, carrier gas and flow rate, operating temperature range, and ion source temperature.

§ 766.16 Developing the analytical test method.

Because of the matrix differences of the chemicals listed for testing, no one method for sample selection, preparation, extraction and clean up is prescribed. For analysis, High Resolution Gas Chromatography (HRGC) with High Resolution Mass Spectrometry (HRMS) is the method of choice, but other methods may be used if they can be demonstrated to reach the target LOQs as well as HRGC/HRMS.

(a) *Sample selection.* The chemical product to be tested should be sampled so that the specimens collected for analysis are representative of the whole. Additional guidance for sample selection is provided under § 766.12.

(b) *Sample preparation.* The sample must be mechanically homogenized and subsampled as necessary. Subsamples must be spiked or reinforced with surrogate compounds or with standard stock solutions, and the surrogates or standards must be thoroughly inco
rated by mechanical agitation. A
tional guidance is provided u
§ 766.12.

(c) *Sample extraction and clea*
The spiked samples must be treate
separate the HDDs/HDFs from
sample matrix. Methods are revie
in the Guidelines under § 766.12,
the final method or methods are
to the discretion of the analyst,
vided the instrumental response of
surrogates meets the criteria liste
the *Quality Assurance Plan for M*
urement of Brominated or Chlorin
Dibenzofurans and Dibenzodio
Appendixes B and C of the Guideli
Cleanup techniques are describe
the Guidelines. These are chose
the discretion of the analyst to r
the requirements of the chem
matrix.

(d) *Analysis.* The method of ch
is High Resolution Gas Chromato
phic/High Resolution Mass Spe
metric Determination, (HR
HRMS) but alternate methods ma
used if the manufacturer can der
strate that the method will reach
target LOQs as well as HRGC/HR
Specific operating requirements
found in the Guidelines.

§ 766.18 Method sensitivity.

The target level of quantitation
quired under § 766.27 for each H
HDF congener is the level which r
be attempted for each resolved HF
peak for that congener. For at l
one product sample, at least two a
yses of the same isotopically lab
HDD/HDF internal calibration st
ards spiked to a final product con
tration equal to the LOQ for that
gener must be reproducibly extrac
cleaned up, and quantified to wi
±20 percent of each other. For e
spiked product sample, the signa
noise ratio for the calibration stan
peaks after complete extraction
cleanup must be 10:1 or greater.
recovery of the internal calibra
standards in the extracted and clea
up product samples must be withi
to 150 percent of the amount spi
and the results must be corrected
recovery.

Subpart B—Specific Chemical Testing/Reporting Requirements

§ 766.20 Who must test.

(a) Any person who manufactures, imports, or processes a chemical substance listed in § 766.25 must test that chemical substance and must submit appropriate information to EPA according to the schedules described in § 766.35. Chemical substances manufactured, imported or processed between January 1, 1984 and the date of promulgation of this part are subject to testing upon the effective date of this part. All other chemical substances are subject to testing immediately upon manufacture, import or processing. EPA expects that only manufacturers and importers will perform testing, and that the cost of testing will be passed on to processors through the pricing mechanism, thereby enabling them to share in the cost of testing. However, processors will be called upon to sponsor testing should manufacturers and importers fail to do so. A processor may apply for an exemption from testing upon certification to EPA that a manufacturer or importer is testing the chemical substance which that person processes.

(b) If no manufacturer or importer described in § 766.20 submits a letter of intent to perform testing within the period described under § 766.35(a), or an exemption application under § 790.45(a), or a request for an exclusion or waiver under § 766.32, EPA will issue a notice in the FEDERAL REGISTER to notify all processors of that chemical substance. The notice will state that EPA has not received any of the documents described in the previous sentence, and that current processors will have 30 days to submit either a letter of intent to perform the test or submit an exemption application.

(c) If no manufacturer, importer or processor submits a letter of intent to perform testing of a specific chemical substance produced by a specific process, EPA will notify all manufacturers, importers, and processors, either by notice in the FEDERAL REGISTER or by letter, that all exemption applications will be denied and that within 30 days all manufacturers, importers, and processors will be in violation of this part until a proposed study plan is submitted for required testing.

(d) Manufacturers, importers, and processors who are subject to this part must comply with the test rule development and exemption procedures in Part 790 of this chapter, except as modified in this part.

§ 766.25 Chemical substances for testing.

(a) *Listing of chemical substances.* Chemical substances required to be tested for HDDs/HDFs under this rule are listed in this section. The listing is by Chemical Abstracts Service (CAS) Number and common name.

NOTE: For purposes of guidance only, EPA lists the chemical substances subject to testing under this part in two classes—those known to be manufactured or imported between January 1, 1984, and promulgation of this part, and those not known to be manufactured or imported at the time of promulgation of this part.

(1) *Chemicals substances known to be manufactured between January 1, 1984 and date of promulgation of this part.*

CAS No.	Chemical name
79-94-7	Tetrabromobisphenol-A.
118-75-2	2,3,5,6-Tetrachloro-2,5-cyclohexadiene-1,4-dione.
118-79-6	2,4,6-Tribromophenol.
120-83-2	2,4-Dichlorophenol.
1163-19-5	Decabromodiphenyloxide.
4162-45-2	Tetrabromobisphenol-A-bisethoxylate.
21850-44-2	Tetrabromobisphenol-A-bis-2,3-dibromopropyl ether.
25327-89-3	Allyl ether of tetrabromobisphenol-A.
32534-81-9	Pentabromodiphenyloxide.
32536-52-0	Octabromodiphenyloxide.
37853-59-1	1,2-Bis(tribromophenoxy)-ethane.
55205-38-4	Tetrabromobisphenol-A diacrylate.

(2) *Chemicals not known to be manufactured between January 1, 1984 and the date of promulgation of this part.*

CAS No.	Chemical name
79-95-8	Tetrachlorobisphenol-A.
87-10-5	3,4',5-Tribromosalicylanilide.
87-65-0	2,6-Dichlorophenol.
95-77-2	3,4-Dichlorophenol.
95-95-4	2,4,5-Trichlorophenol.
99-28-5	2,6-Dibromo-4-nitrophenol.
120-36-5	2[2,4-(Dichlorophenoxy)]-propionic acid.
320-72-9	3,5-Dichlorosalicyclic acid.
488-47-1	Tetrabromocatechol.
576-24-9	2,3-Dichlorophenol.
583-78-8	2,5-Dichlorophenol.
608-71-9	Pentabromophenol.

CAS No.	Chemical name
615-58-7	2,4-Dibromophenol.
933-75-3	2,3,6-Trichlorophenol.
1940-42-7	4-Bromo-2,5-dichlorophenol.
2577-72-2	3,5-Dibromosalicylanilide.
3772-94-9	Pentachlorophenyl laurate.
37853-61-5	Bismethylether of tetrabromobisphenol-A.
	Alkylamine tetrachlorophenate.
	Tetrabromobisphenol-B.

(b) *Grade to be tested.* If the same process is used to manufacture all grades of the same chemical substance, only one grade need be tested. The grade to be tested must be the grade subject to the most intense heat and alkalinity for the longest duration of time, manufactured under each different process. If the heat, alkalinity and duration of reaction do not differ for various grades, the test substance must be the grade of chemical substance with the highest volume of sales.

§ 766.27 Congeners and LOQs for which quantitation is required.

Quantitation at the target LOQ shown for each of the following HDDs/HDFs which may be present in the chemical substances is required for the chemical substances listed under § 766.25. Analysis must take place for either chlorinated or brominated dibenzodioxins or dibenzofurans, whichever is predominantly expected to occur in the chemical substance to be tested. Only chlorinated and brominated congeners need be quantified: for chemical substances containing predominantly chlorine atoms, only congeners totally chlorinated at the numbered positions need be quantified; for chemical substances containing predominantly bromine atoms, only congeners totally brominated at the numbered positions need be quantified.

Chlorinated dioxins	Brominated dioxins	LOQ
2,3,7,8-TCDD	2,3,7,8-TBDD	0.1 ppb.
1,2,3,7,8-PeCDD	1,2,3,7,8-PeBDD	0.5 ppb.
1,2,3,4,7,8-HxCDD	1,2,3,4,7,8-HxBDD	2.5 ppb.
1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-HxBDD	2.5 ppb.
1,2,3,7,8,9-HxCDD	1,2,3,7,8,9-HxBDD	2.5 ppb.
1,2,3,4,6,7,8-HpCDD	1,2,3,4,6,7,8-HpBDD	100 ppb.
2,3,7,8-TCDF	2,3,7,8-TBDF	1 ppb.
1,2,3,7,8-PeCDF	1,2,3,7,8-PeBDF	5 ppb.
2,3,4,7,8-PeCDF	2,3,4,7,8-PeBDF	5 ppb.
1,2,3,4,7,8-HxCDF	1,2,3,4,7,8-HxBDF	25 ppb.
1,2,3,6,7,8-HxCDF	1,2,3,6,7,8-HxBDF	25 ppb.
1,2,3,7,8,9-HxCDF	1,2,3,7,8,9-HxBDF	2
2,3,4,6,7,8-HxCDF	2,3,4,6,7,8-HxBDF	2
1,2,3,4,6,7,8-HpCDF	1,2,3,4,6,7,8-HpBDF	1
1,2,3,4,7,8,9-HpCDF	1,2,3,4,7,8,9-HpBDF	1

§ 766.28 Expert review of protocols.

EPA will gather a panel of expe
analysis of chemical matrices
HDDs/HDFs to review the prot
for testing submitted to EPA.
panel members will be employe
EPA and/or of other U.S. Govern
agencies who have had experien
analysis of chemical matrices a
chemical wastes for HDDs/HDFs
panel will recommend to the Dir
EPA Office of Toxic Substa
whether the protocol submitte
likely to allow analysis down t
target LOQs, or if not, whethe
protocol represents a good faith
on the part of the tester to ac
the lowest possible LOQs. The
determination to accept or rejec
protocol will be made by the Dir
Office of Toxic Substances. EPA
review the submitted protocols a
idly as possible and will complet
review within 90 days after re
EPA may require submission o
vised protocols. Comments and re
mendations will be transmitted t
submitter, and if revisions ar
quired, a final protocol must be
mitted to EPA within 90 days
EPA transmits such recommenda

§ 766.32 Exclusions and waivers.

(a) *Reasons for exclusions and*
ers. Any person subject to the te
requirements of this part may re
an exclusion or waiver from testin
any one of the following reasons:

(1) *Exclusions may be granted*
Testing of the appropriate gra
the chemical substance has al
been carried out, either analytical
ing at the lowest LOQ possible,
appropriate QA/QC, or a we
signed bioassay with appropriate
QC or;

(ii) Process and reaction condi
of the chemical substance such
no HDDs/HDFs could be prod
under those conditions;

(2) *Waivers may be granted if.* (i) A responsible company official certifies that the chemical substance is produced only in quantities of 100 kilograms or less per year, only for research and development purposes; or

(ii) In the judgement of EPA, the cost of testing would drive the chemical substance off the market, or prevent resumption of manufacture or import of the chemical substance, if it is not currently manufactured, and the chemical substance will be produced so that no unreasonable risk will occur due to its manufacture, import, processing, distribution, use, or disposal. (In this case, the manufacturer must submit to EPA all data supporting the determination.)

(iii) Waivers may be appropriately conditioned with respect to such factors as time and conditions of manufacture or use. The grade of decabromodiphenyl oxide produced by Dow Chemical Company (Dow) for the National Toxicology Program (NTP) bioassay on that chemical is excluded from the testing requirement under this part. Provided, however, that this exclusion will not apply if Dow fails to supply to EPA within 60 days of the effective date of this section evidence showing which grade was used for the NTP bioassay.

(b) *Timing.* Exclusion or waiver requests and detailed supporting data must be submitted to EPA within 60 days from the effective date of this part for persons manufacturing, importing or processing a chemical substance as of the date of promulgation, or 60 days prior to the date of resumption of manufacture or import for a chemical substance produced by a specific process if the chemical substance is not manufactured, imported or processed as of the date of promulgation.

(c) *Publication.* Within 10 days of receipt of any exclusion or waiver request, EPA will issue in the FEDERAL REGISTER a notice of such receipt. EPA will also issue a notice of its decision on each exclusion or waiver request within 60 days of receipt.

(d) *Decision.* The EPA Director of the Office of Toxic Substances will make the decision to grant or deny waivers or exclusions.

§ 766.35 Reporting requirements.

(a) *Letters of intent, exemption applications, and protocols*—(1) *Letters of Intent.* (i) Persons who have manufactured or imported chemical substances listed under § 766.25 between January 1, 1984, and the effective date of this part are required to submit under § 790.45 of this chapter a letter of intent to test or an exemption application. These letters must be submitted no later than September 3, 1987.

(ii) Persons who commence manufacture, import or processing of a chemical substance listed under § 766.25 that has not been manufactured, imported or processed between January 1, 1984 and the effective date of this part must submit under § 790.45 of this chapter, within 60 days after the commencement of manufacture, import, or processing of the chemical substance, a letter of intent to test or an exemption application.

(iii) Persons who commence manufacture, import or processing of a chemical substance listed under § 766.25 between the effective date of this part and the end of the reimbursement period for that particular chemical substance produced by a specific process must submit under § 790.45 of this chapter, within 60 days after the commencement of manufacture, import or processing of the chemical substance, a letter of intent to test or an exemption application.

(2) *Protocols.* (i) Each person who is manufacturing or processing a chemical substance listed in § 766.25 as of the effective date of this part who submits a notice of intent to test under § 766.35(a)(1) must submit a protocol for the test as follows:

(A) The protocols for each chlorinated chemical substance produced by each process to be tested must be submitted to EPA no later than 12 months after the effective date of this part.

(B) The protocol for each brominated chemical substance produced by each process to be tested must be submitted to EPA no later than 24 months after the effective date of this part.

(ii) For chemical substances produced by a specific process not manufactured or processed as of the effective date of this part, a person who begins manufacture and submits a notice of intent to test must submit protocols for the test as follows:

(A) Protocols for testing must be submitted 12 months after manufacture begins for chlorinated chemical substances.

(B) Protocols for testing must be submitted 24 months after manufacture begins for brominated chemical substances.

(iii) For persons who have been granted exemptions, waivers or exclusions from testing, protocols must be submitted 12 months after expiration of the exemption, waiver or exclusion for chlorinated chemical substances, and 24 months after expiration of the exemption, waiver or exclusion for brominated chemical substances.

(b) *Information that must be submitted to EPA.* (1) Persons who manufacture or import a chemical substance listed under § 766.25 must report no later than October 5, 1987 or 90 days after the person first manufactures or imports the chemical substance, whichever is later, the results of all existing test data which show that chemical substance has been tested for the presence of HDDs/HDFs.

(2) Any manufacturer or importer of a chemical substance listed in § 766.25 in possession of unpublished health and safety studies on HDDs/HDFs is required to submit copies of such studies to EPA no later than October 5, 1987 or 90 days after the person first manufactures or imports the chemical substance, whichever is later. The following provisions of Part 716 of this chapter apply to submission of these studies: §§ 716.3, 716.10(a) (1) and (4); 716.20(a) (1), (2), (3), (4), (7), (8) and (10); 716.25; 716.30; 716.35(a) (1), (2), and (4) [if applicable]; 716.35 (b) and (c); 716.40 (a) and (b); 716.50; 716.55; and 716.60(a)(2).

(3) No later than October 5, 1987 or 90 days after the person first manufactures or imports the substance listed in § 766.25, any manufacturer or importer of a chemical substance listed in § 766.25 must submit records required to be held under Part 717 of this chapter on any HDDs/HDFs.

(4) Test results. (i) Test results must be reported to EPA not later than 270 days after EPA's transmission of comments or 180 days after a final protocol is submitted to EPA, whichever is shorter.

(ii) For purposes of reporting test results to EPA, and for further reporting triggered by a positive test result under § 766.35(c), a positive test result is defined at § 766.3.

(iii) Reporting of test results must follow procedures set out in Part 790 of this chapter, except as modified in this part.

(c) *Information required to be submitted to EPA after submission of a positive test result.* (1) Any person who submits a positive test result for a specific chemical substance listed under § 766.25 must submit to EPA no later than 90 days after the date of submission of the positive test result the following:

(i) A completed form (EPA 7910-51) for that chemical substance. The form appears at paragraph (d)(5) of this section and copies are available from the TSCA Assistance Office, (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington, DC, 80460. One form must be submitted for each chemical substance for which a positive test result has been submitted.

(ii) Health and safety studies for the chemical substance for which a positive test result has been reported. The following provisions of Part 716 of this chapter apply to submission of these studies: §§ 716.3; 716.10 (a) (1), (2), (3) and (4); 716.20; 716.25; 716.30; 716.35(a) (1), (2), and (4), [if applicable]; 716.35 (b) and (c); 716.40 (a) and (b); 716.50; 716.55; 716.60(a)(2).

(iii) Copies of records on the chemical substances required to be held under Part 717 of this chapter.

(2) If a positive test result on a chemical substance is received from one person but not from others, EPA may issue a notice in the FEDERAL REGISTER listing that chemical substance and requiring any person manufacturing, importing or processing that chemical substance who has not submitted a positive test result to submit

the information required in Part II of EPA Form 7910-51 (appearing in § 766.35(d)). Such a notice will be published only if EPA needs additional process data to make a determination of unreasonable risk.

(d) Dioxin/Furan Reporting Form:

Page 1 of 6

EPA

United States Environmental Protection Agency
Washington, DC 20460

Dioxins/Furans Report

Form Approved
OMB No 2070-0017
Approval expires 8/89

When completed, send this form to

Document Control Officer
Office of Toxic Substances, TS-793
US Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

For Agency Use Only

Document Control Number

Docket Number

Part I — General Information

Section A — Submitter Identification

Confidential

Mark (X) the "Confidential" box next to any subsection you claim as confidential

1a. Person Submitting Notice

Name of authorized official

Title

Company

Mailing address *(number and street)*

City, State, and ZIP Code

Section B — Chemical Identity Information *(Use a separate form for each chemical reported.)*

Mark (X) the "Confidential" box next to any subsection you claim as confidential

1. Chemical name and CAS Registry Number

Part II — Process and Release Information

Section A — Flow Diagram

Mark (X) the "Confidential" box next to any subsection you claim as confidential

Complete this section for each unit process. Provide a general process block flow diagram that identifies major unit operations and treatment processes and indicate the types and points of release of byproducts and residuals. *(See example I attached.)*

(1) Include intermediates, coproducts and byproducts produced by the process.

(2) Proide a block for each major unit operation *(e.g., reactor, washer, filtration, air emission control, aeration lagoon, etc.)* in the production process and in the residuals management process.

(3) Identify process input such as raw materials, reagents, and solvents by chemical or common name and CAS number, and indicate the point of introduction with arrows.

(4) For each unit operation in which the temperature is not ambient, specify temperature or temperature range in each block of the flow diagram.

(5) Specify operating pressure or pressure range in each block of the flow diagram for each unit operation in which the pressure is not atmospheric.

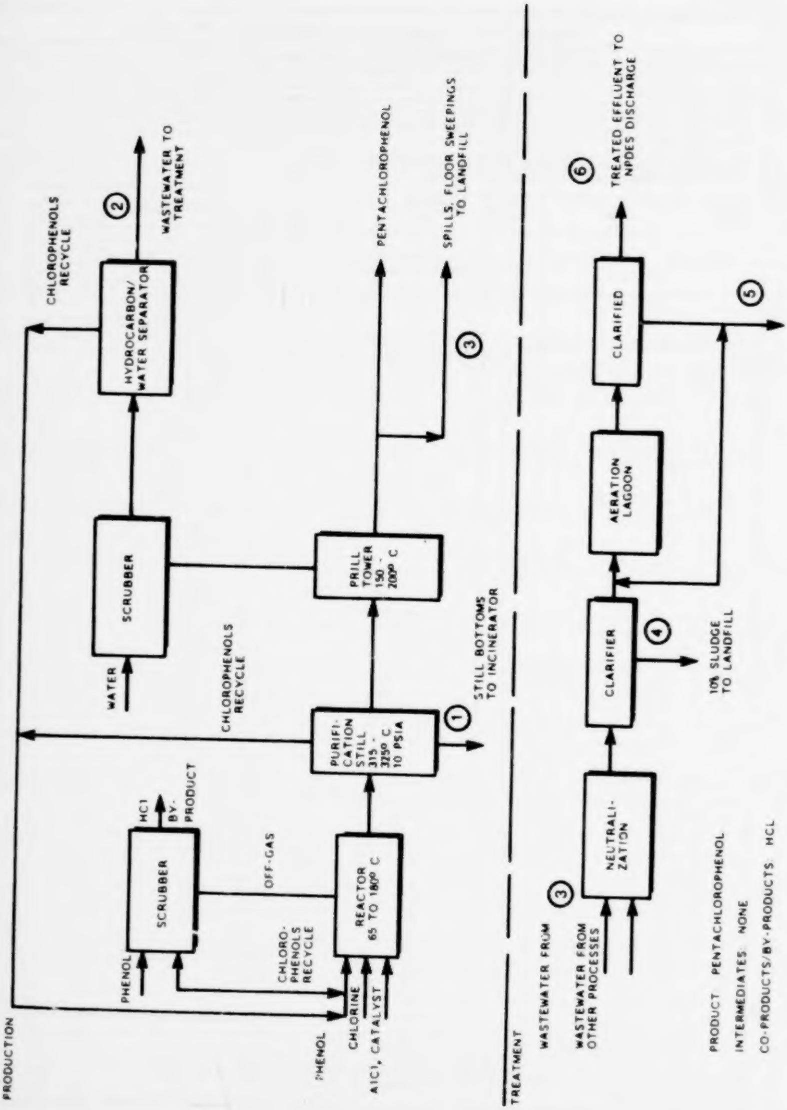
(6) Identify the composition of the reaction vessel wherever one is used *(e.g., stainless steel, glass lined)*.

(7) Number all points in the flow diagram from which the chemical substance will be released into the environment. *(See example I)*

☐ Mark (x) this box if you attach a continuation sheet

EPA Form 7710-51 (9-88)

EXAMPLE 1 - PROCESS BLOCK FLOW DIAGRAM


PRODUCTION
PHENOL
CHLORINE
AlCl$_3$ CATALYST
PHENOL
SCRUBBER
HCl BY-PRODUCT
CHLORO-PHENOLS RECYCLE
OFF-GAS
REACTOR 65 TO 180° C
PURIFICATION STILL 315 - 325° C 10 PSIA
①
STILL BOTTOMS TO INCINERATOR
CHLOROPHENOLS RECYCLE
WATER
SCRUBBER
PRILL TOWER 190 - 200° C
HYDROCARBON/ WATER SEPARATOR
CHLOROPHENOLS RECYCLE
②
WASTEWATER TO TREATMENT
PENTACHLOROPHENOL
③
SPILLS, FLOOR SWEEPINGS TO LANDFILL
TREATMENT
WASTEWATER FROM ③
WASTEWATER FROM OTHER PROCESSES
NEUTRALIZATION
CLARIFIER
④
10% SLUDGE TO LANDFILL
AERATION LAGOON
CLARIFIED
⑤
⑥
TREATED EFFLUENT TO NPDES DISCHARGE
PRODUCT: PENTACHLOROPHENOL
INTERMEDIATES: NONE
CO-PRODUCTS/BY-PRODUCTS: HCL

Page 3 of 6

Section B — Environmental Release and Disposal

You must make separate confidentiality claims for the release number and the amount of the substance released and other release and disposal information. Mark (x) the "Confidential" box next to each item you claim as confidential.

(1) — Enter the number of each release point identified in the process dexcription, part II, Section A
(2) — Estimate the amount of the chemical substance released directly to the environment or into control technology *(in kg/day or kg/batch)*
(3) — Mark (x) this column if entries in columns (1) and/or (2) are confidential
(4) — Identify the media *(air, land, or water)* to which the substance will be released from the release point
(5) — Describe control technology, if any, that will be used to limit the release of the substance to the environment. For releases disposed of on land, characterize the disposal method
(6) — Mark (x) this column if entries in columns (4) and/or (5) are confidential
(7) — Identify the destination(s) of releases to water

Release Number *(1)*	Amount of substance released *(2)*	Confidential *(3)*	Media of release *(4)*	Control technology *(5)*	Confidential *(6)*

(7) Mark (x) the destination(s) of releases to water ☐ POTW *(publicly owned treatment works)* ☐ Navigable waterway ☐ Other *(specify)*

☐ Mark (x) this box if you attach a continuation sheet

EPA Form 7710-51 (8-86)

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Part III — Production, Import, and Use Information

Mark (x) the "Confidential" box next to any item you claim as confidential.

1. **Production volume** — Report the production volume during the past 12 months of production. Also report the **maximum** production volume for any consecutive 12-month period during the past 3 years of production.

Past 12-month production *(kg/year)*	Maximum 12-month production *(kg/year)*	**Confidential**

2. **Use information** — You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the substance, and other use information. Mark (x) the "Confidential" box next to any item you claim as confidential.

(1) — Describe each category of use of the chemical substance by function and application.
(2) — Mark (x) this column if entry in column (1) is confidential.
(3) — Estimate the percent of total production for the past 3 years devoted to each category of use.
(4) — Mark (x) this column if entry in column (3) is confidential.
(5) — Estimate the percent of the substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use.
(6) — Mark (x) this column if entry in column (5) is confidential.
(7) — Mark (x) whether the use is site-limited, industrial, commercial, or consumer. Mark more than one column if appropriate.
(8) — Mark (x) this column if entries in column (7) are confidential.

Read the **Instructions Manual** for examples.

Category of use *(1)*	**Confidential** *(2)*	Production *(percent)* *(3)*	**Confidential** *(4)*	Formulation *(percent)* *(5)*	**Confidential** *(6)*	*Mark (x) appropriate column(s) (7)*				**Confidential** *(8)*
						Site-limited	Industrial	Commercial	Consumer	

☐ Mark (x) this box if you attach a continuation sheet.

3. **Hazard Information** — Include in the notice a copy or reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person regarding protective equipment or practices for the safe handling, transport, use, or disposal of the new chemical substance. List in part IV any hazard information you include.

☐ Mark (x) this box if you attach hazard information.

EPA Form 7710-51 (9-86)

Page 5 of 6

4. Occupational Exposure — You must make separate confidentiality claims for the description of worker activity, physical form of the substances, number of workers exposed, and duration of activity. Mark (x) the "Confidential" box next to any item you claim as confidential.

(1) — Describe the activities in which workers may be exposed to the chemical substance. Include activities in which workers wear protective equipment.
(2) — Mark (x) this column if entry in column (1) is confidential.
(3) — Indicate the physical form(s) of the chemical substance at the time of exposure.
(4) — Mark (x) this column if entry in column (3) is confidential.
(5) — Estimate the maximum number of workers involved in each activity.
(6) — Mark (x) this column if entry in column (5) is confidential.
(7) and (8) — Estimate the maximum duration of the activity for any worker in hours per day and days per year.
(9) — Mark (x) this column if entries in column (7) and/or (8) are confidential.

Worker Activity (1)	Confidential (2)	Physical Forms (3)	Confidential (4)	Maximum number (5)	Confidential (6)	Maximum duration		Confidential (9)
						Hrs/day (7)	Days/yr (8)	

☐ Mark (x) this box if you attach a continuation sheet

EPA Form 7710-51 (9-86)

Page 6 of 6

Part IV — List of Attachments

Attach continuation sheets for sections of the form and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of the attachments. In column (2) below, enter the inclusive page numbers of each attachment.

Mark (x) the "Confidential" box next to any attachment name you claim as confidential. Read the **Instructions Manual** for guidance on how to claim any information in an attachment as confidential.

Attachment name *(1)*	Attachment page numbers *(2)*	Confidential *(3)*

☐ Mark (x) this box if you attach a continuation sheet. Enter the attachment name and number.

Certification

I certify that to the best of my knowledge and belief:

1. The company named in part I, section A, subsection 1a of this form manufactures, imports, or proceses, other than in small quantities for research purposes, the substance identified in part I, section B.
2. All information provided in this notice is complete and truthful as of the date of submission.

Signature of authorized official	Date	Confidential
Signature of agent *(if applicable)*	Date	Confidential

EPA Form 7710-51 (9-88)

General Instructions
EPA Form 7710-51, Dioxins/Furans Report

You must provide all information requested in this form to the extent that it is known to or reasonably ascertainable by you.

Part I — General Information

You must provide the chemical identity of the chemical substance reported on, even if you claim the identity as confidential.

Part II — Process and Release Information

You may need additional copies of part II, sections A and B if there are several manufacture operations that you will describe in the form. You should reproduce these sections as needed.

Part III — Production, Import, and Use Information

You must provide production volume, percent of production used for each use category, and whether use is industrial, commercial or consumer. Also included is a copy of any hazard warning and a report of occupational exposure. Copies may be made of any part of the form if additional space is needed.

Part IV — List of Attachments

You should attach additional sheets if you do not have enough space on the form to answer a question fully. In part IV, list all attachments you include with the form.

Optional Information

You may include with the form any information that you want EPA to consider in evaluating the substance.

Confidentiality Claims

You may claim any information in this form as confidential. To assert a claim on the form, mark (x) the "Confidential" box next to the information that you claim as confidential. To assert a claim in an attachment, circle or bracket the information you claim as confidential.

A. General Instructions

Complete the form using a typewriter or by printing legibly in black ink. All information must be in English. Provide all information requested on the form to the extent that you know or can reasonably ascertain it. You may attach continuation sheets to any subsection or item on the form. Mark (x) the appropriate box on the form if you attach continuation sheets.

The use of the term "manufacture" in this form includes both manufacture and import. Manufacturers and importers must fully comply with the information requirements set forth in the Polyhalogenated Dibenzo-p-dioxins/Dibenzofurans Testing and Reporting Requirements Rule. However, importers are not required to submit any data under section 8(a) of TSCA which relates solely to exposure to humans or the environment outside the United States.

Any manufacturer or importer using this form may photocopy the form, sections of the form, or these instructions as frequently as needed.

B. Certification

The official named in Part I, section A of the form, as th person submitting the notice, must sign the certificatio on page 6 of the form. This official is responsible for th truth and accuracy of each statement in the certificatio

C. Asserting Confidentiality Claims

A manufacturer or importer may assert a claim of conf dentiality for any information submitted to EPA on th form. To assert confidentiality claims for specific informa tion on the form (e.g., submitter identity, process data, o use information), mark (x) in the "Confidential" box on th form located to the right of the information. Markin these boxes will provide a quick reference for EPA t determine what information is confidential, thus aidin proper treatment of confidential business information.

Part I — General Information

Section A — Submitter Identification

Person submitting notice — Enter information on th official who signed the general certification on page 6.

Section B — Chemical Identity Information

Chemical Name and CAS Registry Number — List th common name and Chemical Abstracts Registry number if available, for the chemical on which you are reporting

II. Process and Release Information

Section A — Flow Diagram

Flow diagram — Submit a block flow diagram for each major unit operation and treatment process involved in manufacturing the chemical on which you are reporting. Include the following information:

(1) identify the product process, and chemical intermediates, coproducts and byproducts produced by the process;

(2) provide a block for each major unit operation (e.g., reactor, washer, filtration, air emission control, aeration lagoon, etc.) in the production process and in the residuals management process;

(3) identify all process input such as raw materials, reagents, solvents, etc. by chemical or common name and CAS number, and indicate the point of introduction with arrows;

(4) for each unit operation in which the temperature is not ambient, specify temperature or temperature range in each block of the flow diagram;

(5) specify operating pressure or pressure range in each block of the flow diagram for each unit operation in which pressure is not atmospheric;

(6) identify the composition of the reaction vessel wherever one is used;

(7) number all points in the flow diagram from which the chemical substance will be released into the environment. See the example provided.

Section B — Environmental Release and Disposal

Column (1) — For each release point indicated in the flow diagram (part II, section A), enter the corresponding number.

Column (2) — Estimate the amount of the chemical (in kg/day for continuous operations or kg/batch for batch operations) that will be released from the release point before entering control technology. Base your estimate on your maximum 12-month production volume.

Column (4) — Enter the medium (air, water, land) into which the release stream discharges (whether or not control technology is used).

Column (5) — For releases to the air and water, describe the type of technology used to control the release of the chemical. Examples of control technologies include carbon filter, scrubber, and biological treatment (primary, secondary, etc.). Give as complete a description as possible. Enter "none" if no control technology is used and the substance is released directly to the environment. For disposal on land, describe the landfill site construction (including liners) and handling procedures. Describe landfill containers.

Column (7) — Mark (x) the appropriate box and/or specify other destinations of water releases.

Columns (3) and (6) — Note that you must make separate confidentiality claims for the release number and amount of chemical substance released and other release and disposal information.

Part III — Production, Import, and Use Information

A. Production Information

Production volume — Report the production volume for the past 12 months of production. Also report the maximum production volume for any consecutive 12-month period during the past 3 years of manufacture. Provide this information in kilograms. Include in your report the amounts produced by persons under contract to you. If part of the amount manufactured is for export, include this amount in your reports.

B. Use Information

Column (1) — Identify each possible category of use of the chemical substance by describing its function and application. "Function" is related to the inherent physical and chemical properties of the substance (e.g., degreaser, catalyst, plasticizer, ultraviolet absorber). "Application" refers to the use of the substance in particular processes or products (e.g., a degreaser may be used for cleaning of fabricated metal parts). Following are some examples of how you should describe categories of use:

- a disperse dye carrier for finishing polyester fibers
- a cross-linking agent for epoxy-like coatings for metal surfaces
- a flame retardant for surface application on cotton apparel, textile home furnishings, and exterior canvas products
- a surfactant in automobile spray wax
- a colorant for paper and other cellulosics

Column (3) — Report the percent of the total production volume during the past 12 months manufactured for each category of use.

EPA Form 7710-51 (9-86)

Column (5) — Estimate the weight percent of the chemical substance contained in any formulated mixture, suspension, emulsion, solution, or gel associated with each category of use as manufactured for commercial purposes at sites under your control. Where the substance is distributed from your site neat, enter N/A for not applicable.

For example:

Category of Use	Formulated Product as Manufactured	Percent of Chemical Substance
Cross-linking agent for epoxy-type coatings for metal surfaces	none, distributed neat	N/A
Flame retardant for cotton apparel	none, distributed neat	N/A
Surfactant in automobile spray wax	spray auto wax (suspension)	4
Colorant for paper and other cellulosics	colorant (solution)	55

Column (7) — Mark (x) to indicate if the category of use is site-limited. Also mark (x) to indicate whether the use is for industrial, commercial, and/or consumer use as defined below. Mark more than one box, if appropriate. For example, a surfactant in an automobile wax may have a consumer use in liquid wax, a commercial use in auto washes, and an industrial use by automobile manufacturers.

Site-limited: The substance is used only on the contiguous property unit where it is manufactured and not intentionally distributed outside that site except for waste disposal. This includes all factories, storage space, and warehouses at the site. An example would be an intermediate which is further reacted on-site to produce a chemical product.

Industrial: The chemical substance or products containing the substance are used only at the site of other manufacturers or processors, e.g., textile dyeing, paint formulation, use of a resin to manufacture an article.

Commercial: The chemical substance or products containing the substance are used by a commercial enterprise providing a consumer service, e.g., use by commercial dry cleaning establishments, use by painting contractors, or use by roofers in commercial building construction.

Consumer: The chemical substance or products containing the substance are used by private individuals in or around a residence, or during recreation, or for any other personal use or enjoyment, e.g., automotive polish, dyed wearing apparel, household cleaners, etc.

Columns (2), (4), (6), (8) — Note that you must make separate confidentiality claims for the description of the category of use, the percent of production devoted to each category, and other use information. The information in this section is used to evaluate potential exposure of the chemical. If you wish to provide any additional information which would assist in this analysis, it may be submitted as optional information.

C. Hazard Information

Include with the form a copy or reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which is provided to any person regarding protective equipment or practices for the safe transport, use or disposal of the chemical. Identify any copies of hazard information or warnings that you attach in Part IV, List of Attachments.

D. Occupational Exposure Information

Column (1) — Describe each specific activity in the operation during which workers may be exposed to the chemical. Such activities may include charging reactor vessels, sampling for quality control, transferring materials from one work area to another, drumming, bulk loading, changing filters, and cleaning equipment. Activities must be described even if workers wear protective equipment or clothing. (Recommended protective equipment should be included as part of Hazard Information)

Column (3) — Indicate the physical form of the substance at the time of exposure, e.g., solid (crystals, granules, powder, dust), liquid (solution, paste, slurry, emulsion, mist, spray), gas (vapor, fume), even if workers wear protective equipment.

EPA Form 7710-51 (9-88)

Column (5) — Report the maximum number of wor involved in each specific activity, based on the repo maximum 12-month production volume.

Column (7) — Enter the maximum duration that any worker will engage in the activity in hours/day, e hours/day.

Column (8) — Enter the maximum duration that any worker will engage in the activity in days/year, base the reported maximum production volume, e.g., days/year.

Columns (2), (4), (6), (9) — Note that you must m seperate confidentiality claims for the descriptio worker activity, physical form of the chemical, numbe workers exposed, and duration of exposure.

Part IV — List of Attachments

Attach any continuation sheets for sections of the f and any optional information, after the last page of form. Clearly identify the attachment and the sectio which it relates. Number consecutively the pages of attachments. Enter the total number of pages in the f on the last line of the List of Attachments. Mark (x) "Confidential" box next to any attachment you claim confidential. See the section of these instructions t Confidentiality for guidance on claiming any informat confidential.

(e) Information collection requirements under this section approved by OMB are as follows:

Paragraph under § 766.35	Currently assigned OMB control No.
(b)(1)	2070-0054
(b)(2)	2070-0004
(b)(3)	2070-0017
(b)(4)(iii)	2070-0054
(c)(1)(i)	2070-0054
(c)(1)(ii)	2070-0004
(c)(1)(iii)	2070-0017

§ 766.38 Reporting on precursor chemical substances.

(a) *Identification of precursor chemical substances.* Precursor chemical substances are produced under conditions that will not yield HDDs and HDFs, but their molecular structure is conducive to HDD/HDF formation under favorable reaction conditions when they are used to produce other chemicals or products. The following precursor chemical substances are identified by Chemical Abstract Service (CAS) number and name.

CAS No	Chemical name
85-22-3	Pentabromoethylbenzene.
87-61-6	1,2,3-Trichlorobenzene.
87-84-3	1,2,3,4,5-Pentabromo-6-chloro-cyclohexane.
89-61-2	1,4-Dichloro-2-nitrobenzene.
89-64-5	4-Chloro-2-nitrophenol.
89-69-0	2,4,5-Trichloronitrobenzene.
92-04-6	2-Chloro-4-phenylphenol.
94-74-6	4-Chloro-o-toloxy acetic acid.
94-81-5	4-(2-Methyl-4-chlorophenoxy) butyric acid.
95-50-1	o-Dichlorobenzene.
95-56-7	o-Bromophenol.
95-57-8	o-Chlorophenol.
95-88-5	4-Chlororesorcinol.
95-94-3	1,2,4,5-Tetrachlorobenzene.
97-50-7	5-Chloro-2,4-dimethoxyaniline.

CAS No.	Chemical name
99-30-9	2,6-Dichloro-4-nitroaniline.
99-54-7	1,2-Dichloro-4-nitrobenzene.
106-46-7	p-Dichlorobenzene.
108-70-3	1,3,5-Trichlorobenzene.
108-86-1	Bromobenzene.
108-90-7	Chlorobenzene.
117-18-0	1,2,4,5-Tetrachloro-3-nitrobenzene.
120-82-1	1,2,4-Trichlorobenzene.
348-51-6	o-Chorofluorobenzene.
350-30-1	3-Chloro-4-fluoronitrobenzene.
615-67-8	Chlorohydroquinone.
626-39-1	1,3,5-Tribromobenzene.
827-94-1	2,6-Dibromo-4-nitroaniline.

(b) *Persons required to report.* All persons who manufacture or import a chemical product produced using any of the chemical substances listed in paragraph (a) of this section as feedstocks or intermediates must report no later than September 29, 1987. Small manufacturers and those manufacturers and importers who produce the precursor chemical substances in quantities of 100 kilograms or less per year only for research and development purposes are not required to report under this section.

(c) *Data to be reported.* Manufacturers and importers of chemical products made from precursor chemical substances identified in paragraph (a) of this section must report process and reaction condition data on Part II of form EPA 7910-51 (appearing at § 766.35(d) for each such chemical product. A separate form EPA 7910-51 must be submitted for each chemical product reported, and the precursor chemical substance used must be identified. All forms must be submitted to EPA no later than September 29, 1987.

(Approved by the Office of Management and Budget under control number 2070-0054)

FINDING AIDS

A list of CFR titles, subtitles, chapters, subchapters and parts and an alphabetical list of agencies publishing in the CFR are included in the CFR Index and Finding Aids volume to the Code of Federal Regulations which is published separately and revised annually.

Material Approved for Incorporation by Reference
Table of CFR Titles and Chapters
Alphabetical List of Agencies Appearing in the CFR
Toxic Substances Chemical—CAS Number Index
Redesignation Table I
Redesignation Table II
List of CFR Sections Affected

Material Approved for Incorporation by Reference

(Revised as of June 29, 1990)

The Director of the Federal Register has approved under 5 U.S.C. 552(a) and 1 CFR Part 51 the incorporation by reference of the following publications. This list contains only those incorporations by reference effective as of the revision date of this volume. Incorporations by reference found within a regulation are effective upon the effective date of that regulation. For more information on incorporation by reference, see the preliminary pages of this volume.

40 CFR CHAPTER I (PARTS 761, 763)—SUBCHAPTER R—TOXIC SUBSTANCES CONTROL ACT

ENVIRONMENTAL PROTECTION AGENCY

	40 CFR
American Society for Testing and Materials 1916 Race St., Philadelphia, PA 19103	
ASTM D 93–85 Standard Test Method for Flash Point by Pensky-Martens Closed Tester.	761.19(b); 761.60(a)(3)(iii)(B)(*6*); 761.75(b)(8)(iii)
ASTM D 129–64 (R 78) Standard Test Method for Sulfur in Petroleum Products (General Bomb Method).	761.19(b); 761.60(a)(3)(iii)(B)(*6*)
ASTM D 240—87 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuel by Bomb Calorimeter.	761.19(b); 761.60(a)(3)(iii)(B)(*6*)
ASTM D 482–80 Standard Test Method for Ash from Petroleum Products.	761.19(b); 761.60(a)(3)(iii)(B)(*6*)
ASTM D 524–81 Standard Test Method for Ramsbottom Carbon Residue of Petroleum Products.	761.19(b); 761.60(a)(3)(iii)(B)(*6*)
ASTM D 808–81 Standard Test Method for Chlorine in New and Used Petroleum Products (Bomb Method).	761.60(a)(3)(iii)(B)(*6*)
ASTM D 923–86 Standard Test Method for Sampling Electrical Insulating Liquids.	761.19(b); 761.60(g)(1)(ii) and (2)(ii)
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TOXIC SUBSTANCES CHEMICAL—CAS NUMBER INDEX

For the convenience of the user, the Office of Pesticides and Toxic Substances, Environmental Protection Agency, has developed the following Toxic Substances CAS Number/Chemical Index, arranged in alphabetic order. The last volume of 40 CFR has a listing according to CAS Number. Publication of this index corresponds to the information given in the CFR. For further information regarding these indices, inquiries may be made to Joan Sutter, Federal Register Staff, Office of Pesticides and Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington DC 20460, TS-788B (202-382-3405).

EDITORIAL NOTE: This listing is provided for information purposes only.

Chemicals in alphabetic order

Name(s) Used in Regulations	CAS No.	40 CFR Cites
Acetamide, *N*-(aminothioxomethyl)-	591-08-2	716.120
Acetamide,*N*-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-bromo-4,6-dinitrophenyl) azo]-4-ethoxyphenyl]-.	3956-55-6	712.30(t), 716.120
Acetamide,*N*-[5-[bis[2-(acetyloxy)ethyl]amino]-2-[(2-bromo-4,6-dinitrophenyl)azo]-4-methoxyphenyl]-.	3618-72-2	799.5000
Acetamide, *N,N'*-diethyl-	685-91-6	716.120
Acetamide (Ethanamide)	60-35-5	704.225(a)
Acetamide, 2-fluoro-	640-19-7	799.5055(c), (e)(1)
Acetic acid, 2,2'-[(dibutylstannylene)bis(thio)]bis-, diisooctyl ester	25168-24-5	712.30(g), 716.120
Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	799.5055(c), (d)(2)
Acetic acid, 2,2'-[(dimethylstannylene) bis(thio)]bis-, diisooctyl ester.	26636-01-1	712.30(g), 716.120
Acetic acid, fluoro-, sodium salt	62-74-8	716.120
Acetic acid, 2,2',2''-[(methylstannylidyne) tris(thio)]tris-, triisooctyl ester.	54849-38-6	712.30(g), 716.120
Acetic acid, ethenyl ester	108-05-4	716.120
Acetonitrile	75-05-8	712.30(d), 716.120
Acetyl bromide	506-96-7	716.120
Acrylamide	79-06-1	712.30(d), 716.120
Alkanes, C_{6-18}-chloro-	68920-70-7	716.120
Alkanes, chloro-	61788-76-9	716.120
Aniline	62-53-3	716.120, 799.500
Anthracene	120-12-7	716.120
9,10-Anthracenedione, 1-amino-4-hydroxy-2-phenoxy-	17418-58-5	712.30(v), 716.120(a)(1)
9,10-Anthracenedione, 1,5-diaminochloro-4,8-dihydroxy-	12217-79-7	712.30(v), 716.120(a)(1)
2,6-Anthracenedisulfonic acid, 4,8-diamino- 9,10-dihydro-1,5-dihydroxy-9,10-dioxo-.	128-86-9	712.30(v), 716.120(a)(1)
2,6-Anthracenedisulfonic acid, 4,8-diamino- 9,10-dihydro-1,5-dihydroxy-9,10-dioxo-, disodium salt.	2861-02-1	712.30(v), 716.120(a)(1)
2-Anthracenesulfonic acid, 4-[[4-(acetylamino) phenyl]amino]-1-amino-9,10-dihydro-9,10-dioxo-.	6247-34-3	712.30(v), 716.120(a)(1)
2-Anthracenesulfonic acid, 4-[[4-(acetylamino) phenyl]amino]-1-amino-9,10-dihydro-9,10-dioxo-, monosodium salt.	6424-85-7	712.30(v), 716.120(a)(1)
Anthraquinone	84-65-1	704.30, 712.30(m), 716.120, 799.500
Antimony	7440-36-0	712.30(d), 716.120
Antimony sulfide (Antimony trisulfide)	1345-04-6	712.30(d), 716.120
Antimony trioxide (Antimony oxide)	1309-64-4	712.30(d), 716.120
Arsine, diethyl-	692-42-2	716.120
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Asbestiform mineral(s)	12172-73-5	763, 716.120
Asbestiform mineral(s)	12001-29-5	763, 716.120
Asbestiform mineral(s)	1332-21-4	763, 716.120
2*H*-Azepin-2-one, hexahydro-	105-60-2	716.120
Barium chloride	10361-37-2	712.30(w)

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Benzenamine, 4-bromo-	106-40-1	712.30(d), 716.120
Benzenamine, 2-bromo-6-chloro-4-nitro-	99-29-6	716.120
Benzenamine, 2-bromo-4,6-dinitro-	1817-73-8	712.30(d), 716.120
Benzenamine, 2-chloro-	95-51-2	712.30(d), 716.120, 799.5000
Benzenamine, 3-chloro-	108-42-9	712.30(d), 716.120
Benzenamine, 4-chloro-	106-47-8	712.30(d), 716.120, 799.5000
Benzenamine, 3-chloro-, hydrochloride	141-85-5	712.30(d), 716.120
Benzenamine, 2-chloro-4,6,-dinitro-	3531-19-9	716.120
Benzenamine, 4-chloro-2,6-dinitro-	5388-62-5	712.30(d), 716.120
Benzenamine, *N*-(2-chloroethyl)-*N*-ethyl-	92-49-9	712.30(d)
Benzenamine, 4-chloro-2-methyl-	95-69-2	721.462
Benzenamine, 4-chloro-2-methyl-, hydrochloride	3165-93-3	721.462
Benzenamine, 4-chloro-6-methyl-	87-63-8	721.462
Benzenamine, 2-chloro-4-nitro-	121-87-9	712.30(d), 716.120
Benzenamine, 2-chloro-5-nitro-	6283-25-6	712.30(d), 716.120
Benzenamine, 4-chloro-2-nitro-	89-63-4	712.30(d), 716.120
Benzenamine, 4-chloro-3-nitro-	635-22-3	712.30(d), 716.120
Benzenamine, 2,6-dibromo-4-nitro-	827-94-1	712.30(d), 716.120
Benzenamine, 2,3-dichloro-	608-27-5	712.30(d), 716.120
Benzenamine, 2,4-dichloro-	554-00-7	712.30(d), 716.120
Benzenamine, 2,5-dichloro-	95-82-9	712.30(d), 716.120
Benzenamine, 3,4-dichloro-	95-76-1	712.30(d), 716.120, 799.5000
Benzenamine, 3,5-dichloro-	626-43-7	712.30(d), 716.120
Benzenamine, 2,6-dichloro-4-nitro-	99-30-9	712.30(d), 716.120, 799.5000
Benzenamine, 2,4-dinitro-	97-02-9	712.30(d), 716.120, 799.5000
Benzenamine, 2-methyl-	95-53-4	716.120
Benzenamine, 4-methyl-	106-49-0	716.120
Benzenamine, 4,4'-methylenebis-	101-77-9	712.30(d), 716.120
Benzenamine, 4,4'-methylenebis[2-chloro- (MBOCA)	101-14-4	704.225(a)
Benzenamine, 2-nitro-	88-74-4	712.30(d), 716.120, 799.5000
Benzenamine, 3-nitro-	99-09-2	712.30(d), 716.120
Benzenamine, 4-nitro-	100-01-6	712.30(d), 716.120, 799.5000
Benzenamine, 2,4,6-tribromo-	147-82-0	712.30(d), 716.120
Benzenamine, 2,4,6-trichloro-	634-93-5	712.30(d), 716.120
Benzene, 1, 3-bis(1-isocyanato- 1-methylethyl)-	2778-42-9	716.120
Benzene, bromo-	108-86-1	716.120
Benzene, butyl-	104-51-8	716.120
Benzene, chloro-	108-90-7	712.30(d), 716.120, 799.1051
Benzene, chloromethyl-	100-44-7	712.30(d)
Benzene, 1-chloro-2-methyl-	95-49-8	712.30(d), 716.120
Benzene, 1-chloro-4-methyl-	106-43-4	716.120
Benzene, 1-chloro-4-(trichloromet.,l)-	5216-25-1	799.5055(c), (e)(1)
Benzene, 1-chloro-4(trifluoromethyl)-	98-56-6	712.30(f), 716.120
Benzene, 1,2-dichloro-	95-50-1	712.30(d), 716.120, 799.1052, 799.5055(c)
enzene, 1,3-dichloro-	541-73-1	712.30(d), 716.120
enzene, 1,4-dichloro-	106-46-7	712.30(d), 716.120, 799.1052
enzene, dichloromethyl-	98-87-3	712.30(d)
enzene, 1,2-dichloro-4-(trifluoromethyl)-	328-84-7	712.30(1), 716.120
enzene, 1,3-diisocyanato-	123-61-5	716.120
enzene, 1,4-diisocyanato-	104-49-4	716.120
enzene, diisocyanatomethyl- (unspecified toluene diisocyanate)	1321-38-6	704.225(a), 716.120
enzene, 1,3-diisocyanatomethyl-	26471-62-5	704.225(a), 716.120
enzene, 1,3-diisocyanato-2 methyl-	91-08-7	704.225(a), 716.120
nzene, 2,4-diisocyanato-1-methyl-	584-84-9	704.225(a), 716.120
nzene, dimethyl-	1330-20-7	712.30(d)
nzene, 1,2-dimethyl-	95-47-6	712.30(d), 716.120
nzene, 1,3-dimethyl-	108-38-3	712.30(d), 716.120
nzene, 1,4-dimethyl-	106-42-3	712.30(d), 716.120
nzene, (1,1-dimethylethyl)-	98-06-6	716.120
nzene, 1,1'-[1,2-ethanediylbis (oxy)]bis[2,4,6-tribromo-	37853-59-1	712.30(d)
nzene, ethenyl-	100-42-5	712.30(d)
nzene, ethyl-	100-41-4	712.30(d)
nzene, ethylmethyl- (mixed isomers)	25550-14-5	712.30(d), 716.120, 799.2175
nzene, 1-ethyl-2-methyl-	611-14-3	716.120, 716.120(b)
nzene, isocyanato-	103-71-9	712.30(d)
zene, 1-isocyanato-2-[4-isocyanatophenyl)methyl]-	5873-54-1	716.120

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
Benzene, 2-isocyanato-4-[(4-isocyanato phenyl)methyl]-1-methyl-	75790-84-0	716.120
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)thio]-	75790-87-1	716.120
Benzene, methyl-	108-88-3	712.30(d), 716.120
Benzene, 1,1'-methylenebis [isocyanato-	26447-40-5	716.120
Benzene, 1,1'-methylenebis [2-isocyanato-	2536-05-2	716.120
Benzene, 1,1'-methylenebis [4-isocyanato-	101-68-8	716.120
Benzene, 1,1'-methylenebis [4-isocyanato-3-methyl-	139-25-3	716.120
Benzene, (1-methylethenyl)-	98-83-9	716.120
Benzene, 1-methyl-4-(1-methylethyl)-	99-87-6	716.120
Benzene, 1-[2-methyl-2-propenyl)oxy]-2-nitro-	13414-54-5	712.30(g), 716.120
Benzene, (1-methylpropyl)-	135-98-8	716.120
Benzene, nitro-	98-95-3	712.30(d), 716.120
Benzene, 1,1'-oxybis-	101-84-8	712.30(w), 716.120
Benzene, pentabromoethyl-	85-22-3	712.30(m), 716.120, 721.1515
Benzene, pentachloro-	608-93-5	712.3o(d), 716.120, 799.5055(c), (d)(2)
Benzene, 1,2,3,4-tetrachloro-	634-66-2	712.30(d), 716.120
Benzene, 1,2,3,5-tetrachloro-	634-90-2	712.30(d), 716.120
Benzene, 1,2,4,5-tetrachloro-	95-94-3	712.30(d), 716.120, 799.1054, 799.5055(c), (d)(2)
Benzene, 1,2,3-trichloro-	87-61-6	712.30(d), 716.120, 799.1053
Benzene, 1,2,4-trichloro-	120-82-1	712.30(d), 716.120, 799.1053
Benzene, 1,3,5-trichloro-	108-70-3	712.30(d), 716.120
Benzene, trichloromethyl-	98-07-7	712.30(d)
Benzene, trimethyl-, (mixed isomers)	25551-13-7	712.30(g), 716.120
Benzene, 1,2,3-trimethyl-	526-73-8	712.30(g), 716.120, 799.2175
Benzene, 1,2,4-trimethyl-	95-63-6	712.30(d), 716.120, 716.120(b), 799.2175
Benzene, 1,3,5-trimethyl-	108-67-8	712.30(g), 716.120(b), 799.2175
Benzeneacetic acid, α-(hydroxymethyl)-9-methyl-3-oxa-9-azatricyclo[3.3.1.$0^{2,4}$]non-7-ylester, hydrobromide, [7(*S*)-($1\alpha,2\beta,4\beta,5\alpha,7\beta$)]-.	114-49-8	712.30(d)
Benzeneacetic acid, α-(hydroxymethyl)-9-methyl-3-oxa-9-azatricyclo[3.3.1.$0^{2,4}$]non-7-ylester, *N*-oxide, hydrobromide, [7(*S*)-($1\alpha,2\beta,4\beta,5\alpha,7\beta$)]-.	6106-81-6	712.30(d)
Benzeneacetonitrile, 4-bromo-	16532-79-9	799.5055(c), (d)(1), (2), (e)(1)
1,2-Benzenediamine	95-54-5	712.30(d), 716.120
1,3-Benzenediamine	108-45-2	712.30(d), 716.120
1,4-Benzenediamine	106-50-3	712.30(d), 716.120
1,2-Benzenediamine, dihydrochloride	615-28-1	712.30(f), 716.120
1,3-Benzenediamine, dihydrochloride	541-69-5	712.30(f), 716.120
1,4-Benzenediamine, dihydrochloride	624-18-0	712.30(d), 716.120
1,4-Benzenediamine, ethanedioate (1:1)	62654-17-5	712.30(f), 716.120
1,3-Benzenediamine, sulfate (1:1)	541-70-8	712.30(f), 716.120
1,4-Benzenediamine, sulfate (1:1)	16245-77-5	712.30(f), 716.120
1,2-Benzenediamine, 4-butyl-	3663-23-8	712.30(f), 716.120
1,2-Benzenediamine, 4-chloro-	95-83-0	712.30(f), 716.120
1,3-Benzenediamine, 4-chloro-	5131-60-2	712.30(f), 716.120
1,4-Benzenediamine, 2-chloro-, dihydrochloride	615-46-3	712.30(f), 716.120
1,2-Benzenediamine, 4-chloro-, sulfate (1:1)	68459-98-3	712.30(f), 716.120
1,3-Benzenediamine, 4-chloro-, sulfate	68239-80-5	712.30(f), 716.120
1,4-Benzenediamine, 2-chloro-, sulfate	6219-71-2	712.30(f), 716.120
1,2-Benzenediamine, 5-chloro-3-nitro-,	42389-30-0	712.30(f), 716.120
1,4-Benzenediamine, 2,5-dichloro-	20103-09-7	712.30(f), 716.120
Benzenediamine, 4-ethoxy-	1197-37-1	712.30(f), 716.120
1,3-Benzenediamine, 4-ethoxy-, dihydrochloride	67801-06-3	712.30(f), 716.120
D1,3-Benzenediamine, 4-ethoxy-, sulfate (1:1)	68015-98-5	712.30(f), 716.120
1,3-Benzenediamine, *ar*-ethyl-*ar*-methyl-	68966-84-7	712.30(f), 716.120
1,3-Benzenediamine, 4-methoxy-	615-05-4	712.30(d), 716.120
1,4-Benzenediamine, 2-methoxy-	5307-02-8	712.30(f), 716.120
1,3-Benzenediamine, 4-methoxy-, dihydrochloride	614-94-8	712.30(f), 716.120
1,3-Benzenediamine, 4-methoxy-, sulfate	6219-67-6	712.30(f), 716.120
1,3-Benzenediamine, 4-methoxy-, sulfate (1:1)	39156-41-7	712.30(f), 716.120
Benzenediamine, *ar*-methyl-	25376-45-8	712.30(f), 716.120
1,2-Benzenediamine, 3-methyl-	2687-25-4	712.30(d), 716.120
1,2-Benzenediamine, 4-methyl-	496-72-0	712.30(d), 716.120
1,3-Benzenediamine, 2-methyl-	823-40-5	712.30(d), 716.120
1,3-Benzenediamine, 4-methyl-	95-80-7	712.30(f), 716.120
1,3-Benzenediamine, 5-methyl-	108-71-4	712.30(f), 716.120
1,4-Benzenediamine, 2-methyl-	95-70-5	712.30(f), 716.120

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1,4-Benzenediamine, 2-methyl-, dihydrochloride	615-45-2	712.30(f), 716.120
1,4-Benzenediamine, 2-methyl-, sulfate	6369-59-1	712.30(d), 716.120
1,4-Benzenediamine, 2-methyl-, sulfate (1:1)	615-50-9	712.30(f), 716.120
1,3-Benzenediamine, 2-methyl-4,6-bismethylthio)-	104983-85-9	721.557
1,3-Benzenediamine, 4-methyl-2,6-bis(methylthio)	102093-68-5	721.557
1,2-Benzenediamine, 4-nitro-	99-56-9	712.30(d), 716.120
1,3-Benzenediamine, 4-nitro-	5131-58-8	712.30(f), 716.120
1,3-Benzenediamine, 5-nitro-	5042-55-7	712.30(f), 716.120
1,2-Benzenediamine, 4-nitro-, dihydrochloride	6219-77-8	712.30(f), 716.120
1,2-Benzenediamine, 4-nitro-, sulfate (1:1)	68239-82-7	712.30(f), 716.120
1,4-Benzenediamine, 2-nitro-	5307-14-2	712.30(f), 716.120
1,4-Benzenediamine, 2-nitro-, dihydrochloride	18266-52-9	712.30(f), 716.120
1,4-Benzenediamine, 2-nitro-, sulfate (1:1)	68239-83-8	712.30(f), 716.120
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7	712.30(d), 716.120, 799.5000
1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-36-2	712.30(g), 716.120
1,2-Benzenedicarboxylic acid, bis(1-methylheptyl) ester	131-15-7	716.120
1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	84-69-5	716.120
1,2-Benzenedicarboxylic acid, bis(oxiranylmethyl) ester	7195-45-1	716.120
1,2-Benzenedicarboxylic acid, butyl cyclohexyl ester	84-64-0	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, butyl octyl ester	84-78-6	716.120
1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, decyl hexyl ester	25724-58-7	716.120
1,2-Benzenedicarboxylic acid, decyl octyl ester	119-07-3	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	712.30(d), 716.120, 799.5000
1,2-Benzenedicarboxylic acid, di-C_{7-11}, branched and linear alkyl esters.	68515-42-4	799.5000
1,2-Benzenedicarboxylic acid, di-C_{9-11}, branched alkyl esters, C_{10}-rich.	68515-49-1	799.5000
1,2-Benzenedicarboxylic acid , di-C_{11-14}, branched alkyl esters, C_{13}-rich.	68515-47-9	799.5000
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	84-61-7	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, dihexyl ester	84-75-3	716.120, 799.5000
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	799.5000
1,2-Benzenedicarboxylic acid, diisodecyl ester	26761-40-0	712.30(d), 716.120, 799.5000
1,2-Benzenedicarboxylic acid, diisononyl ester	28553-12-0	716.120
1,2-Benzenedicarboxylic acid, diisooctyl ester	27554-26-3	716.120
1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3	712.30(d), 716.120, 799.5000
1,2-Benzenedicarboxylic acid, dinonyl ester	84-76-4	716.120
1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0	712.30(d), 716.120
1,2-Benzenedicarboxylic acid, di-2-propenyl ester	131-17-9	712.30, 716.120
1,2-Benzenedicarboxylic acid, ditridecyl ester	119-06-2	712.30(d), 716.120, 799.5000
1,2-Benzenedicarboxylic acid, diundecyl ester	3648-20-2	716.120, 799.5000
1,2-Benzenedicarboxylic acid, 2-ethylhexyl ester	85-69-8	716.120
1,2-Benzenedicarboxylic acid, 2-ethylhexyl-8-methylnonyl ester	89-13-4	716.120
1,2-Benzenedicarboxylic acid, hexylisodecyl ester	61702-81-6	716.120
1,2-Benzenedicarboxylic acid, isodecyltridecyl ester	61886-60-0	716.120
1,3-Benzenedimethanamine	1477-55-0	712.30(f)
1,4-Benzenediol	123-31-9	712.30(d), 716.120, 799.2200
Benzeneethanamine, α,α-dimethyl-	122-09-8	716.120
Benzenesulfonic acid, 3-amino-	121-47-1	716.120
Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-	16110-89-7	712.30(d)
Benzenesulfonyl chloride	98-09-9	716.120
Benzenethiol	108-98-5	716.120
1,2,4-Benzenetricarboxylic acid, tris(2-ethylhexyl) ester	3319-31-1	712.30(g), 716.120
Benzofuran, 2,3-dihydro-2,2-dimethyl-7-nitro-	13414-55-6	712.30(g), 716.120
7-Benzofuranamine, 2,3-dihydro-2,2-dimethyl-	68298-46-4	712.30(g), 716.120
Benzoic acid, 2-[[2-amino-6-[[4'-[(3-carboxy-4-hydroxyphenyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-5-hydroxy-7-sulfo-1-naphthalenyl] azo]-5-nitro-, trisodium salt.	6739-62-4	716.120
Benzoic acid, 5-[[4'-[(2-amino-8-hydroxy-6-sulfo-1-naphthalenyl)azo][1,1'-biphenyl]-4-yl]azo)-2-hydroxy-, disodium salt.	2429-84-7	716.120
Benzoic acid, 5-[[4'-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl) azo] [1,1'-biphenyl] -4-yl]azo]-2-hydroxy-, disodium salt.	2429-82-5	716.120
Benzoic acid, 5-[[4'-[(1-amino-4-sulfo -2-naphthalenyl)azo][1,1'-biphenyl]-4-yl]azo] -2-hydroxy-, disodium salt.	2429-79-0	716.120
Benzoic acid, 3-chloro-methyl ester	2905-65-9	712.30(d)

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Benzoic acid, 5-[[4'-[[2,6-diamino-3-[[8-hydroxy-3,6-disulfo-7-[(4-sulfo-1-naphthalenyl)azo]-2-naphthalenyl]azo]-5-methylphenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, tetrasodium salt.	2429-81-4	716.120
Benzoic acid, 5-[[4'-[(2,6-diamino -3-methyl-5-sulfophenyl)azo] -3,3'-dimethyl][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt.	6637-88-3	716.120
Benzoic acid, 5-[[4'-[[2,6-diamino -3-methyl-5-[(4sulfophenyl)azo] phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt.	2586-58-5	716.120
Benzoic acid, 5-[[4'-[[2,6-diamino -3-methyl-5-[(4-sulfophenyl)azo] phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxy-3-methyl-, disodium salt.	6360-54-9	716.120
Benzoic acid, 5-[[4'-[[2,4-dihydroxy -3-[(4-sulfophenyl) azo]phenyl]azo] [1,1'-biphenyl]-4-yl]azo] -2-hydroxy-, disodium salt	2893-80-3	716.120
Benzoic acid, 3,3'-[(3, 7-disulfo-1,5-naphthalenediyl)bis [azo(6-hydroxy-3,1-phenylene)azo [6(or 7)-sulfo-4,1-naphthalenediyl]azo[1,1'-biphenyl]-4,4'-diylazo]]bis[6-hydroxy-, hexasodium salt.	8014-91-3	716.120
Benzoic acid, 3,3'-methylenebis [6-amino-di-2-propenyl] ester	61386-02-5	721.205
(Benzo[*d,e,f*]phenanthrene)	129-00-0	704.225(a), 716.120
1*H*-Benzotriazole	95-14-7	712.30(w), 716.120
1*H*-Benzotriazole, methyl-	29385-43-1	712.30, 716.120
Benzoyl chloride	98-88-4	712.30(d)
2-Benzyl-4-chlorophenol	120-32-1	712.30, 716.120
[1,1'-Bicyclohexyl]-2-one	90-42-6	716.120
2,2'-Bioxirane	1464-53-5	712.30(d), 716.120
1,1'-Biphenyl	92-52-4	712.30(d), 716.120, 799.925
1,1'-Biphenyl, 2-bromo-	2052-07-5	721.600
1,1'-Biphenyl, 3-bromo-	2113-57-7	721.600
1,1'-Biphenyl, 4-bromo-	92-66-0	721.600
1,1'-Biphenyl, 2,2',3,3' ,4,4',5,5',6,6'-decabromo-	13654-09-6	721.600
1,1'-Biphenyl, 4,4'-dibromo-	92-86-4	721.600
1,1'-Biphenyl, 4,4'-diisocyanato-3,3'-dimethyl-	91-97-4	716.120
1,1'-Biphenyl, hexabromo-	36355-01-8	721.600
1,1'-Biphenyl, nonabromo-	27753-52-2	721.600
1,1'-Biphenyl, octabromo-	27858-07-7	721.600
[1,1'-Biphenyl]-4,4'-bis(diazonium), 3,3'-dimethoxy-	20282-70-6	716.120
[1,1'-Biphenyl]-4,4'-diamine	92-87-5	716.120
[1,1'-Biphenyl]-4,4'-diamine, dichloro-	1331-47-1	716.120
[1,1'-Biphenyl]-3-ol	580-51-8	716.120
[1,1'-Biphenyl]-4-ol	92-69-3	716.120
Bis(2-chloroethoxy)methane	111-91-1	716.120, 799.5055(c), (d)(2), (e)(1)
Bis(2-chloroisopropyl) ether	108-60-1	716.120, 799.5055(c),(d)(2)
Bisphenol A	80-05-7	712.30(k), 716.120, 799.940
1,2-Bis(tribromophenoxy)ethane	37853-59-1	712.30, 716.120
4-Bromobenzyl cyanide	16532-79-9	799.5055(c)
Bromobiphenyl	92-66-0	721.600
2-Bromobiphenyl	2052-07-5	721.600
3-Bromobiphenyl	2113-57-7	721.600
Bromoform	75-25-2	716.120, 799.5055(c),(d)(2)
Bromine	7726-95-6	712.30(w)
1,3-Butadiene, 2-chloro-	126-99-8	712.30(d), 712.30(m), 716.120
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	712.30(d), 716.120
Butanamide *N*-*N'*-(3,3'- dimethyl[1,1'-biphenyl]-4,4'- diyl)bis[3-oxo-.	91-96-3	716.120
1-Butanamine, *N*-butyl-	111-92-2	716.120
2-Butanone	78-93-3	712.30(d), 716.120
2-Butanone oxime	96-29-7	712.30(d), 716.120
2-Butenal	4170-30-3	716.120, 712.30(w)
2-Butenoic acid, 4,4'-[(dibutylstannylene)bis(oxy)]bis [4-oxo-, diisoctyl ester(*Z,Z*)-.	25168-21-2	712.20(g), 716.120
2-(2-Butoxyethoxy)ethyl acetate	124-17-4	712.30(j), 716.120
p-*tert*-Butylbenzaldehyde	939-97-9	704.33, 716.120
p-*tert*-Butylbenzoic acid	98-73-7	704.33, 716.120
p-*tert*-Butyltoluene	98-51-1	704.33, 716.120
C.I. Direct Blue 218	10401-50-0	716.120
Cadmate (6-), [[[1,2-ethanediylbis[nitrilobis (methylene)]] tetrakis[phosphonato]](8-)-*N,N',O,O'',O'''',O''''''*]-, pentapotassium hydrogen, (*OC*-6-21)-.	68309-98-8	704.95

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
Calcium naphthenate	61789-36-4	712.30(h), 716.120
9*H*-Carbazole	86-74-8	716.120
Chlorine	7782-50-5	704.225(a)
2-Chloroaniline	95-51-2	712.30(d), 716.120, 799.5000
4-Chloroaniline	106-47-2	712.30(d), 716.120, 799.5000
4-Chlorobenzotrichloride	5216-25-1	799.5055(c),(e)(1)
Chloroprene	126-99-8	712.30(d), 712.30(m), 716.120
p-Chloro-*m*-xylenol	88-04-0	712.30716.120
C.I. Disperse Blue 79:1	3618-72-2	799.5000
Cobalt	7440-48-4	716.120
Cobalt naphthenate	61789-51-3	712.30(h), 716.120
Cobaltate (6-), [[[1,2-ethanediylbis[nitrilobis(methylene)]] tetrakis[phosphonato]](6-)-*N,N',O,O'',O''',O''''*]-, pentaammonium hydrogen, (*OC*-6-21)-.	68025-39-8	704.95
Cobaltate (6-), [[[1,2-ethanediylbis[nitrilobis(methylene)]]tetrakis [phosphonato]](8-)-, *N,N',O,O'',O''',O''''*]-, pentapotassium hydrogen, (*OC*-6-21)-.	67924-23-6	704.95
Cobaltate (6-), [[[1,2-ethanediylbis[nitrilobis(methylene)]] tetrakis [phosphonato]](8-)- *N,N',O,O'',O''',O''''*]-, pentasodium hydrogen, (*OC*-6-21)-.	67969-67-9	704.95
Cobaltous sulfate	10124-43-3	712.30(w)
o-Cresol	95-48-7	712.30(d), 716.120, 799.1250
m-Cresol	108-39-4	712.30(d), 716.120, 799.1250
p-Cresol	106-44-5	712.30(d), 716.120, 799.1250
Crotonaldehyde	4170-30-3	799.5000
Cumene	98-82-8	712.30(m), 716.120
Cuprate(4-), [*μ*-[[6,6'-[3,3'-dihydroxy[1,1'-biphenyl]-4-4'-diyl)bis(azo)]bis[4-amino-5-hydroxy-1,3-naphthalene disulfonato]](8-)]]di-, tetrasodium.	16143-79-6	716.120
Cuprate(3-, [*μ*-[7-([3,3'-dihydroxy-4'-[[1-hydroxy-6-(phenylamino)-3-sulfo-2-naphthalenyl] azo][1,1'-biphenyl]-4-yl]azo]-8-hydroxy -1,6-naphthalene disulfonato (7-)]]di-, trisodium.	6656-03-7	716.120
Cuprate(2-), [5-[[4'-[[2,6-dihydroxy-3-[(2-hydroxy-5-sulfophenyl) azo]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-2-hydroxybenzonato(4-)]-, disodium	16071-86-6	716.120
Cuprate, (6-), [[[1,2-ethanediylbis [nitrilobis(methylene)]]tetrakis [phosphonato]](8-)-*N,N',O,O'',O''',O''''*]-, pentapotassium hydrogen, (*OC*-6-21)-.	67989-89-3	704.95
Cyclodecane, hexabromo-	25637-99-4	712.30(d)
Cyclododecane, 1,2,5,6,9,10-hexabromo-	3194-55-6	712.30(d)
2,5-Cyclohexadiene-1,4-dione	106-51-4	712.30(d), 716.120
Cyclohexane	110-82-7	712.30(p), 716.120
Cyclohexane, 1,4-bis[(2,3-epoxypropoxy)methyl]-	14228-73-0	716.120
yclohexane, 1,3-bis(isocyanatomethyl)-	38661-72-2	716.120
yclohexane, 1,4-bis(isocyanatomethyl)-	10347-54-3	716.120
yclohexane, 1,2-dibromo-4-(1,2-dibromoethyl)-	3322-93-8	712.30(k), 716.120
yclohexane, 1,4-diisocyanato-	2556-36-7	716.120
yclohexane, 5-isocyanato-1- (isocyanatomethyl)-1,3,3-trimethyl-	4098-71-9	716.120
yclohexane, 1,1'-methylenebis[4-isocyanato-	5124-30-1	716.120
2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester	5493-45-8	716.120
yclohexanone	108-94-1	712.30(d), 716.120
yclohexene, 4-ethenyl-	100-40-3	712.30(w)
Cyclohexen-1-one, 3,5,5-trimethyl-	78-59-1	712.30(d), 716.120
3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4	712.30(d), 716.120
4-D	94-75-7	799.5055(c)
cabromobiphenyl	13654-09-6	721.230
cabromodiphenyl ether	1163-19-5	712.30, 716.120
allyl phthalate	131-17-9	712.30, 716.120
Diaminoanisole	5307-02-8	712.30(f)716.120
-Diaminoanisole sulfate	39156-41-7	712.30(f), 716.120
romomethane	74-95-3	799.5055(c), (d)(2)
romobiphenyl	92-86-4	721.230
romoneopentyl glycol	3296-90-0	712.30, 716.120
-Di-*tert*-butyl phenol	128-39-2	712.30(p), 716.120
N-butyl phthalate	84-74-2	712.30(d), 716.120, 799.5000
utyltin bis(isooctyl maleate)	25168-21-2	712.30(g), 716.120
utyltin *S,S'*-bis(isooctyl mercaptoacetate)	25168-24-5	712.30(g), 716.120
utyltin bis(lauryl mercaptide)	1185-81-5	712.30(g), 716.120
utyltin dilaurate	77-58-7	712.30(g), 716.120
Dichloroaniline	95-76-1	712.30(d), 716.120, 799.5000

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
1,2-Dichlorobenzene	95-50-1	712.30(d), 716.120, 799.1052, 799.5055(c), (d)(2)
Dichlorobenzotrifluoride	328-84-7	712.30(1), 716.120
1,1-Dichloroethane	75-34-3	716.120, 799.5055(c),(d)(2)
Dichloromonofluoromethane	75-43-4	712.30(w), 716.120
2,6-Dichloro-4-nitroaniline	99-30-9	712.30(d), 716.120, 799.5000
1,3-Dichloropropanol	96-23-1	799.5055(c), (d)(1), (e)(1)
Diethanolamine	111-42-2	712.30(w), 716.120
Diethylene butyl ether acetate	124-17-4	799.1560
Diethylene glycol butyl ether	112-34-5	799.1560
Diethylene glycol monoethyl ether	111-90-0	712.30, 716.120
Diethylene glycol monomethyl ether	111-77-3	712.30, 716.120
Di-2-ethylhexyl phthalate	117-81-7	712.39(d), 716.120, 799.5000
Diheptyl phthalate (branched and linear isomers)	68515-44-6	799.5025
Di(heptyl-, nonyl-) phthalate (branched and linear isomers)	111381-89-6	799.5025
Di(heptyl-, nonyl-, undecyl-) phthalate (mixed isomers)	68515-42-4	799.5000
Di(heptyl-, undecyl-) phthalate (branched and linear isomers)	111381-90-9	799.5025
Di-*N*-hexyl phthalate	84-75-3	716.120, 799.5000
Dihexyl phthalate (mixed isomers)	68515-50-4	799.5000
Dihydrosafrole	94-58-6	799.5055(c),(d)(2)
Diisodecyl phenyl phosphite	25550-98-5	712.30(p), 716.120, 799.5000
Diisodecyl phthalate	26761-40-0	712.30(d), 716.120, 799.5000
Diisodecyl phthalate (mixed isomers)	68515-49-1	799.5000
Diisopropyl biphenyl	69009-90-1	712.30(k), 716.120
2,3-Dimethoxystrychnidin-10-one	357-57-3	716.120
Dimethyl formamide	68-12-2	712.30(w), 716.120
Dimethyl phthalate	131-11-3	712.30(d), 716.120, 799.5000
Dimethyltin *S,S'*-bis(isooctyl mercaptoacetate)	26636-01-1	712.30(g), 716.120
2,4-Dinitroaniline	97-02-9	712.30(d), 716.120, 799.5000
Dinonyl phthalate ((branched and linear isomers)	68515-45-7	799.5025
Di(nonyl-, undecyl-) phthalate (branched and linear isomers)	111381-91-0	799.5025
1,3-Dioxan-4-ol, 2,6-dimethyl-, acetate	828-00-2	716.120
1,3-Dioxolane	646-06-0	712.30(g), 716.120
Dipropylene glycol monomethyl ether	34590-94-8	712.30(w), 716.120
Disiloxane, 1,1,3,3-tetramethyl-1,3-bis-[3-oxiranylmethoxy)propyl]-	126-80-7	716.120
Disulfide, dimethyl-	624-92-0	704.225(a)
Ditridecyl phthalate	119-06-2	712.30(d), 716.120, 799.5000
Ditridecyl phthalate (mixed isomers)	68515-47-9	799.5000
Diundecyl phthalate (branched and linear isomers)	3648-20-2	716.120, 799.5000, 799.5025
Endrin	72-20-8	799.5055(c),(d)(2)
Ethanamine	75-04-7	716.120
Ethanamine, *N,N'*–diethyl-	121-44-8	716.120
Ethanamine, 2,2-dimethoxy-*N*-methyl-	122-07-6	712.30(d)
Ethanamine, *N*-ethyl-	109-89-7	716.120
Ethane, 1-bromo-2-chloro-	107-04-4	721.648
Ethane, chloro-	75-00-3	712.30(w), 716.120
Ethane, 1-chloro-1,1-difluoro-	75-68-3	712.30(w), 716.120
Ethane, 1,1-dichloro-	75-34-3	716.120, 799.5055(c), (d)(2)
Ethane, 1,2-dichloro-	107-06-2	716.120
Ethane, 1,1-difluoro-	75-37-6	712.30(w), 716.120
Ethane, 1,1-dimethoxy-	534-15-6	712.30(d)
Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1	716.120, 799.5055(c)
Ethane, nitro-	79-24-3	712.30(w), 716.120
Ethane, 1,1,2,2-tetrabromo-	79-27-6	704.225(a)
Ethane, 1,1,1,2-tetrachloro-	630-20-6	716.120
Ethane, 1,1,2,2-tetrachloro-	79-34-5	716.120
Ethane, 1,1,1-trichloro-	71-55-6	712.30(d),(w), 716.120, 799.3450
Ethane, 1,1,2-trichloro-	79-00-5	712.30, 716.120
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	716.120
1,2-Ethanediamine, *N*-(2-aminoethyl)-	111-40-0	712.30(d), 716.120, 799.1575
Ethanol, 2-butoxy-	111-76-2	712.30, 716.120
Ethanol, 2-chloro-, phosphate (3:1)	115-96-8	704.225(a)
Ethanol, 2-(2,4-diaminophenoxy)-, dihydrochloride	66422-95-5	712.30(f), 716.120
Ethanol, 1,2-dibromo-, acetate	24442-57-7	712.30(d)
Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-, diacetate	111-21-7	712.30(j), 716.120
Ethanol, 2-(2-ethoxyethoxy)-	111-90-0	712.30, 716.120
Ethanol, 2,2'-iminobis-	111-42-2	712.30, 716.120
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	712.30, 716.120
Ethanol, 2,2',2''-nitrilotris-	102-71-6	712.30, 716.120
Ethene, bromo-	593-60-2	712.30(d)

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Ethene, (2-chloroethoxy)-	110-75-8	716.120
Ethene, 1,1-difluoro-	75-38-7	712.30(d), 716.120, 799.1700(a)(1)
Ethene, fluoro-	75-02-5	712.30(f), 716.120
Ethene, tetrachloro-	127-18-4	716.120
Ethene, tetrafluoro-	116-14-3	712.30(f), 716.120, 799.1700(a)(1)
Ethyl methacrylate	97-63-2	712.30(d), 799.5055(c),(d)(2)
Ethylamine, distillation residues	79771-09-8	721.1250
Ethylene bisoxyethylene diacetate	111-21-7	712.30(j), 716.120
Ethylene bis(penta bromophenoxide)	61262-53-1	712.30, 716.120
Ethylene bis(tetra bromophthalimide)	32588-76-4	712.30, 716.120
Ethylene(5,6-dibromonorbornane-2,3-dicarboximide)	41291-34-3	712.30, 716.120
o-Ethyltoluene	611-14-3	716.120, 716.120(b)
m-Ethyltoluene	620-14-4	716.120, 716.1203
p-Ethyltoluene	622-96-8	716.120, 716.1203
Ferromanganese	12604-53-4	712.30(w)
Formamide	75-12-7	712.30(d), 716.120
Formamide, *N,N'*-dimethyl-	68-12-2	712.30, 716.120
2-Furancarboxaldehyde	98-01-1	716.120
2,5-Furandione	108-31-6	712.30(d), 716.120
Glycidol	556-52-5	712.30(d), 716.120
Haloalkyl epoxide	428-25-8	716.120
Hexabromocyclododecane	3194-55-6	712.30, 716.120
1,2,3,4,7,7-Hexachloronorbornadiene	3389-71-7	712.30(j), 716.120, 721.342,
Hexafluoropropylene oxide	428-59-1	712.30(d), 716.120, 721.1175
Hexamethylphosphoramide	680-31-9	721.350
N-Hexane	110-54-3	799.2155
Hexane, 1,6-diisocyanato-	822-06-0	716.120, 712.30(w)
Hexane, 1,6-diisocyanato-2,2,4-trimethyl-	16938-22-0	716.120
Hexane, 1,6-diisocyanato-2,4,4-trimethyl-	15646-96-5	716.120
1,6-Hexanediamine, *N,N'*-dibutyl-	4835-11-4	712.30(d)
Hexanedinitrile	111-69-3	716.120
Hexanoic acid, 2-ethyl-	149-57-5	712.30(k), 716.120, 799.1650
1-Hexanol, 2-ethyl-	104-76-7	716.120
Hydrazine, 1,1-diphenyl-	530-50-7	716.120
Hydrazine, 1,2-diphenyl-	122-66-7	716.120
Hydrazinecarboxamide	57-56-7	704.225(a)
Hydrazinecarboxamide, monohydrochloride	563-44-7	704.225(a)
Hydrocyanic acid	74-90-8	712.30(w)
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	712.30(w)
Hydroperoxide, 1-methyl-1-phenylethyl-	80-15-9	716.120
Hydroquinone	123-31-9	712.30(d), 716.120, 799.2200
Hydroxylamine, hydrochloride	5470-11-1	704.225
Hydroxylamine	7803-49-8	704.225
Hydroxylamine, sulfate (1:1) (hydroxylamine acid sulfate)	10046-00-1	704.225
Hydroxylamine, sulfate (2:1) (hydroxylamine acid sulfate)	10039-54-0	704.225
(Hydroxylammonium chloride)	5470-11-1	704.225
Hydroxymethyl urea	1000-82-4	712.30(h), 716.120
2,4-Imidazolidinedione, 5,5-dimethyl-3-[2-(oxiranylmethoxy)propyl]-1-(oxiranylmethyl)-	32568-89-1	716.120
2,4-Imidazolidenedione, 3,3'-[2-oxiranylmethoxy)-1,3-propanediyl]bis[5,5-dimethyl-1-(oxiranylmethyl)-	38304-52-8	716.120
Imidazolium compounds, 4,5-dihydro-1-methyl-2-nortallow alkyl-1-(2-tallow amidoethyl), methyl sulfates.	68122-86-1	712.30(w), 716.120(a)(1)
1,3-Isobenzofurandione	85-44-9	799.5055(c)
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	716.120
Isocyanic acid, trimethylcyclohexyl ester	32052-51-0	716.120
1*H*-Isoindole-1,3(2*H*)-dione, 2-(oxiranylmethyl)-	5455-98-1	712.30(d)
Isophorone	78-59-1	712.30(d)716.120
Isopropanol	67-63-0	799.2325
Isopropylamine, distillation residues	79771-08-7	721.1250
Isopropyl biphenyl	25640-78-2	712.30(k), 716.120
Isopropyl phenol	25168-06-3	712.30, 716.120
3(2*H*)-Isothiazolone, 2-octyl-	26530-20-1	716.120
Isoxazolone, 5-(aminomethyl)-	2763-96-4	716.120
Lead naphthenate	61790-14-5	712.30(h), 716.120
Maleic anhydride	108-31-6	712.30(d), 716.120
Maleic hydrazide	123-33-1	799.5055(c),(d)(1),(2)
Malononitrile	109-77-3	716.120, 799.5055(c), (d)(1), (e)(1)
Manganese(II) sulfate (1:1)	7785-87-7	712.30(w)
Manganese dioxide	1313-13-9	712.30(w)

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
Mercaptobenzothiazole	149-30-4	712.30(m), 716.120
Mesityl oxide	141-79-7	712.30(i), 716.120, 799.2500
Methane, bromo-	74-83-9	712.30(w), 716.120
Methane, bromochloro-	74-97-5	716.120
Methane, bromodichloro-	75-27-4	716.120
Methane, chloro-	74-87-3	712.30(d), 716.120, 799.5055(c), (d)(2)
Methane, chlorodifluoro-	75-45-6	712.30(w), 716.120
Methane, dibromo-	74-95-3	716.120, 799.5055(c),(d)(2)
Methane, dibromochloro-	124-48-1	716.120
Methane, dichloro-	75-09-2	712.30(d), 716.120
Methane, dichlorofluoro-	75-43-4	712.30, 716.120
Methane, dimethoxy-	109-87-5	716.120
Methane, nitro-	75-52-5	712.30(w), 716.120
Methane, tribromo-	75-25-2	716.120, 799.5055(c),(d)(2)
Methane, trichloro-	67-66-3	716.120
Methanesulfenyl chloride, trichloride-	594-42-3	799.5055(c), (d)(1),(2), (e)(1)
Methanethiol	74-93-1	799.5055(c),(d)(1)
2,4-Methano-2*H*-indeno[1,2-*b*:5,6-*b*′]bisoxirene, octahydro-	81-21-0	712.30(d)
4, 7-Methanoisobenzofuran-1,3-dione, 4,5,6, 7,8,8-hexachloro-3a,4, 7, 7a-tetrahydro-.	115-27-5	712.30(d)
4, 7-Methanoisobenzofuran-1,3-dione, 3a,4, 7, 7a-tetrahydro-methyl-.	25134-21-8	712.30(d)
Methoxy-2-propanol	107-98-2	712.30, 716.120
yl chloride	74-87-3	712.30(d), 716.120, 799.5055(c), (d)(2)
Methyl chloroform	71-55-6	712.30(d), 716.120, 799.3450
Methylcyclopentane	96-37-7	712.30(o), 716.120, 799.2155
4,4′-Methylenebis(2-chloroaniline)	101-14-4	704.175
2,2′-Methylenebis (phenyleneoxymethyl)] bisoxirane	39817-09-9	716.120
Methylene chloride	75-09-2	712.30(d), 716.120
(1-Methylethyl)benzene	98-82-8	712.30(m), 716.120
Methyl ethyl ketone	78-93-3	712.30(d), 716.120
Methyl ethyl ketoxime	96-29-7	799.2700
Methyl isobutyl ketone	108-10-1	712.30(d), 716.120
N-Methyl-*N*-oleoyltaurine, sodium salt	137-20-2	712.30(m), 716.120
Methylolurea	1000-82-4	712.30(h), 716.120
Molybdenum trioxide	1313-27-5	712.30(w)
Monobutyltin tris(isooctyl mercaptoacetate)	25852-70-4	712.30(g), 716.120
Monomethyltin tris(isooctyl mercaptoacetate)	54849-38-6	712.30(g), 716.120
Morphinan-3,6-diol, 7,8-didehydro- 4,5-epoxy-17-methyl-(5,6), -(*Z*)-9-octadecenoate (salt)	6033-05-2	712.30(d)
Naphthalene	91-20-3	716.120
Naphthalene, chloro-	25586-43-0	704.43, 716.120
Naphthalene, 1-chloro-	90-13-1	704.43, 712.30(d), 716.120
Naphthalene, 2-chloro-	91-58-7	704.43, 716.120
Naphthalene, chloro derivatives	70776-03-3	704.43, 716.120
Naphthalene, 1,2-dichloro-	2050-69-3	704.43, 716.120
Naphthalene, 1,3-dichloro-	2198-75-6	704.43, 716.120
Naphthalene, 1,4-dichloro-	1825-31-6	704.43, 716.120
Naphthalene, 1,5-dichloro-	1825-30-5	704.43, 716.120
Naphthalene, 1,6-dichloro-	2050-72-8	704.43, 716.120
Naphthalene, 1, 7-dichloro-	2050-73-9	704.43, 716.120
Naphthalene, 1,8-dichloro-	2050-74-0	704.43, 716.120
Naphthalene, 2,3-dichloro-	2050-75-1	704.43, 716.120
Naphthalene, 2,6-dichloro-	2065-70-5	704.43, 716.120
Naphthalene, 2,7-dichloro-	2198-77-8	704.43, 716.120
Naphthalene, 1,5-diisocyanato-	3173-72-6	716.120
Naphthalene, heptachloro-	32241-08-0	704.43, 716.120
Naphthalene, hexachloro-	1335-87-1	704.43, 712.30(d), 716.120
Naphthalene, octachloro-	2234-13-1	704.43, 712.30(d), 716.120
Naphthalene, pentachloro-	1321-64-8	704.43, 712.30(d), 716.120
Naphthalene, tetrachloro-	1335-88-2	704.43, 712.30(d), 716.120
Naphthalene, trichloro-	1321-65-9	704.43, 712.30(d), 716.120
2-Naphthalenecarboxamide, *N*,*N*′-(2,2′-dimethoxy[1,1′-biphenyl]-4,4′-diyl)bis[3-hydroxy-.	91-92-9	716.120
2,7-Naphthalenedisulfonic acid, 5-amino-3-[[4′-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo][1,1′-biphenyl]-4-yl]azo]-4-hydroxy-, trisodium salt.	2429-73-4	716.120

Chemicals in alphabetic order—Continued

Name(s) Used in Regulations	CAS No.	40 CFR Cites
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[(2,4-diamino-5-methylphenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy 6-(phenylazo)-, disodium salt.	2429-83-6	716.120
2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[2,4-diaminophenyl)azo] [1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)-, disodium salt.	1937-37-7	712.30(d), 716.120
1,3-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-6[[4'-[(2-hydroxy-1-naphthalenyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]- , disodium salt.	2586-57-4	716.120
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-6-[[4'-[(4-hydroxyphenyl)azo][1,1'-biphenyl]-4-yl]azo]-3-[(4-nitrophenyl)azo]- , disodium salt.	4335-09-5	716.120
2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-3-[[4'-[(hydroxy phenyl)azo][1,1'-biphenyl]-4-yl]azo]-6-(phenylazo)-, disodium salt.	3626-28-6	716.120
2,7-Naphthalenedisulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)] bis[5-amino-4-hydroxy-, tetrasodium salt.	2602-46-2	712.30(d), 716.120
1,3-Naphthalenedisulfonic acid, 6,6'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-5-hydroxy-, tetrasodium salt.	2610-05-1	712.30(d), 716.120
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt.	2429-74-5	716.120
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy, tetrasodium salt.	72-57-1	712.30(d), 716.120
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4,5-dihydroxy-, tetrasodium salt.	2150-54-1	716.120
1,3-Naphthalenedisulfonic acid, 8-[[4'-[(4-ethoxyphenyl)azo] [1,1'-biphenyl]-4-yl]azo] -7-hydroxy-, disodium salt.	3530-19-6	716.120
1,3-Naphthalenedisulfonic acid, 8-[[4'-[(4-ethoxyphenyl)azo] -3,3'-dimethyl [1,1'-biphenyl]-4-yl]azo] -7-hydroxy-, disodium salt.	6358-29-8	716.120
1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-[[4'-[[4-[[(4-methylphenyl) sulfonyl]oxy]phenyl]azo] [1,1'-biphenyl]-4-yl]azo] -, disodium salt.	3567-65-5	716.120
1-Naphthalenesulfonic acid, 3-[[4'-[(6-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo] -3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo] -4-hydroxy-, disodium salt.	6449-35-0	716.120
1-Naphthalenesulfonic acid, 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis[4-amino-, disodium salt.	573-58-0	716.120
1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-hydroxy-, disodium salt.	2429-71-2	716.120
1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[4-amino-, disodium salt.	992-59-6	716.120
2-Napthalenesulfonic acid, 6-amino- (Bronner's acid)	93-00-5	704.225(a)
Naphthenic acids, zinc salts	12001-85-3	716.120
Neodecanoic acid, 2,3-epoxypropyl ester (oxiranylmethyl ester)	26761-45-5	712.30(d), 716.120
Nickelate (6-), [[[1,2-ethanediylbis[nitrilobis (methylene)]]tetrakis [phosphonato]](8-)]-, pentaammonium hydrogen, (*OC*-6-21)-.	68958-66-1	704.95
Nickelate (6-), [[[1,2-ethanediylbis[nitrilobismethylene)]]tetrakis phosphonato]](8-)]-, pentapotassium hydrogen, (*OC*-6-21)-	68958-87-2	704.95
Nickelate (6-), [[[1,2-ethanediylbis[nitrilobis (methylene)]]tetrakis phosphonato]](8-)]-, pentasodium hydrogen, (*OC*-6-21)-.		
2-Nitroaniline	88-74-4	712.30(d), 716.120, 799.5000
4-Nitroaniline	100-01-6	712.30(d), 716.120, 799.5000
Nitroethane	79-24-3	712.30(w), 716.120
Nitromethane	75-52-5	712.30, 711.120
p-Nitrophenol	100-02-7	712.30(w), 779.5055(c),(e)1
4-Nonylphenol,branched	84852-15-3	799.5000
Octabromodiphenyl ether	32536-52-0	712.30, 716.120
Octadecen-1-amine, *Z*-9-	112-90-3	712.30(j), 716.120
Octamethylcyclotetrasiloxane	556-67-2	712.30(m), 716.120, 799.5000
Oleylamine	112-90-3	712.30(j), 716.120
3-Oxa-9-azoniatricyclo[3.3.1.0^{2,4}]nonane,7-(3-hydroxy-1-oxo-2-phenylpropoxy)-9,9-dimethyl-, bromide, [7(*S*)-(1α,2β,4β,5α,7β)]-	155-41-9	712.30(d)
3-Oxa-9-azoniatricyclo[3.3.1.0^{2,4}]nonane,7-(3-hydroxy-1-oxo-2-phenylpropoxy)-6,9-dimethyl-, [7(*S*)-(1α,2β,4β,5α,7β)]- , nitrate (salt)	6106-46-3	712.30(d)
7-Oxabicyclo[4.1.0]heptane	286-20-4	712.30(d)
7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-[2-methoxiranyl]-	96-08-2	712.30(d)

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Chemicals in alphabetic order—Continued

Name(s) Used in Regulations	CAS No.	40 CFR Cites
7-Oxabicyclo[2.2.1]heptane, 1-methyl-4-(1-methylethyl)-	470-67-7	712.30(d)
7-Oxabicyclo[4.1.0]heptane, 3-oxiranyl-	106-87-6	712.30(d)
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3	712.30(d)
6-Oxabicyclo[3.1.0]hexane	285-67-6	712.30(d)
5-Oxatricyclo[8.2.0.$0^{4,6}$]dodecane, 4,12,12-trimethyl-9-methylene, -, [1*R*-(*1R**,*4R**,*6R**,*10S**)]-	1139-30-6	712.30(d)
Oxirane	75-21-8	712.30(d), 716.120
Oxirane, bromomethyl-	3132-64-7	712.30(d), 716.120, 721.950
Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)]bis-	2425-79-8	712.30(d), 716.120
Oxirane, butoxymethyl-	2426-08-6	712.30(d), 716.120
Oxirane, chloromethyl-	106-89-8	712.30(d), 716.120
Oxirane, decyl-	2855-19-8	712.30(d), 716.120
Oxirane, [(1,2-dibromopropoxy)methyl]-	35243-89-1	716.120
Oxirane, [(2,4-dibromophenoxy)methyl]-	20217-01-0	716.120
Oxirane, 2,2-dimethyl-	558-30-5	716.120
Oxirane, 2,3-dimethyl-	3266-23-7	716.120
Oxirane, [(1,1-dimethylethoxy)methyl]-	7665-72-7	716.120
Oxirane, [[4-(1,1-dimethylethyl)phenoxy]methyl]-	3101-60-8	712.30(d), 716.120
Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-.	17557-23-2	716.120
Oxirane, dodecyl-	3234-28-4	716.120
Oxirane, [(dodecyloxy)methyl]-	2461-18-9	712.30(d), 716.120
Oxirane, 2,2'-[1,2-ethanediylbis(oxymethylene)]bis-	2224-15-9	716.120
Oxirane,2,2',2'',2'''-[1,2-ethanediylidenetetrakis(4,1 phenyleneoxymethylene)]tetrakis-.	7328-97-4	716.120
Oxirane, ethenyl-	930-22-3	716.120
Oxirane, ethoxymethyl-	4016-11-9	712.30(d), 716.120
Oxirane, ethyl-	106-88-7	712.30(d), 716.120
Oxirane, [[(2-ethylhexyl)oxy]methyl]-	2461-15-6	716.120
Oxirane, heptadecyl-	67860-04-2	716.120
Oxirane, hexadecyl-	7390-81-0	716.120
Oxirane, [(hexadecyloxy)methyl]-	15965-99-8	716.120
Oxirane, 2,2',2''-[1,2,6-hexanetriyltris(oxymethylene)]tris-	68959-23-9	716.120
Oxirane, methoxymethyl-	930-37-0	712.30(d), 716.120
Oxirane, methyl-	75-56-9	712.30(d), 716.120, 799.3450
Oxirane, 2,2'-[methylenebis (2,1-phenyleneoxymethylene)]bis-	54208-63-8	716.120
Oxirane, [(1-methylethoxy)methyl]-	4016-14-2	712.30(d), 716.120
Oxirane. 2,2'-[(methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)-2,1-ethanediyl]oxymethylene]]bis-.	71033-08-4	716.120
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-.	1675-54-3	716.120
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer.	25085-99-8	712.30(d),16.120
Oxirane, 2,2'-[(1-methylethylidene)bis[4,1-phenyleneoxy-3,1-propanediyloxy-4,1-phenyleneoxymethylene]]bis-.	72319-24-5	716.120
Oxirane, [(methylphenoxy)methyl]-	26447-14-3	712.30(d), 716.120
Oxirane, [(2-methylphenoxy)methyl]-	2210-79-9	716.120
Oxirane, [[4-(1-methyl-1-phenylethyl)phenoxy]methyl]-	61578-04-9	716.120
Oxirane, mono[(C_{10-16}-alkyloxy)methyl] derivatives	68081-84-5	716.120
Oxirane, mono[(C_{12-14}-alkyloxy)methyl] derivatives	68609-97-2	716.120
Oxirane, mono[(C_{8-10}-alkyloxy)methyl] derivatives	68609-96-1	716.120
Oxirane, mono[C_{8-12}-alkyloxy)methyl] derivatives	68987-80-4	716.120
Oxirane, [(4-nitrophenoxy)methyl]-	5255-75-4	716.120
Oxirane, [(9-octadecenyloxy)methyl]-, (*Z*)-	60501-41-9	712.30(e), 716.120
Oxirane, [(octadecyloxy)methyl]-	16245-97-9	716.120
Oxirane, octyl-	2404-44-6	716.120
Oxirane, 2,2'-(oxiranylmethoxy)-1,3-phenylene]bis(methylene)]bis-.	13561-08-5	712.30(d), 716.120
Oxirane, 2,2'-[[[2-oxiranylmethoxy)phenyl]methylene] bis(4,1-phenyleneoxymethylene)]bis-.	67786-03-2	716.120
Oxirane, 2,2'-[oxybis(methylene)]bis-	2238-07-5	712.30(d), 716.120
Oxirane, pentadecyl-	22092-38-2	716.120
Oxirane, (phenoxymethyl)-	122-60-1	712.30(d), 716.120
Oxirane, phenyl-	96-09-3	712.30(d)
Oxirane, 2,2'-[1,3-phenylenebis(oxymethylene)]bis-	101-90-6	712.30(d)716.120
Oxirane, 2,2'-[1,4-phenylenebis(oxymethylene)]bis-	2425-01-6	716.120
Oxirane, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris-	13236-02-7	712.30(d)716.120
Oxirane, [(2-propenyloxy)methyl]-	106-92-3	712.30(d), 716.120
Oxirane, 2,2',2''-[propylidynetris(4,1-phenyleneoxy methylene)]tris-.	68517-02-2	716.120

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
Oxirane, tetradecyl-	7320-37-8	712.30(d), 716.120
Oxirane, [(tetradecyloxy)methyl]-	38954-75-5	716.120
Oxirane, (2,2,2-trichluroethyl)-	3083-25-8	712.30(d), 716.120, 721.975
Oxirane, (2,2,3,3,4,4,5,5,6,6, 7, 7, 7-tridecafluoroheptyl)-	38565-52-5	716.120
Oxirane, tridecyl-	18633-25-5	716.120
Oxirane, trifluoro(trifluoromethyl)-	428-59-1	712.30(d), 716.120, 721.1175
Oxiranecarboxylic acid, 3-methyl-3-phenyl-, ethyl ester	77-83-8	712.30(d), 716.120
Oxirana, carboxylic acid, 3-phenylethyl ester	121-39-1	712.30(d), 716.120
Oxiranemethanamine, *N*-[4-(oxiranylmethoxy)phenyl]-*N*-(oxiranylmethyl)-.	5026-74-4	716.120
Oxiranemethanol	556-52-5	712.30(d), 716.120
Oxiraneoctanoic acid, 3-octyl-, butyl ester	106-83-2	712.30(d)
Oxiraneoctanoic acid, 3-octyl-, 2-ethylhexyl ester	141-38-8	712.30(d)
Oxiraneoctanoic acid, 3-octyl-, octyl ester	106-84-3	712.30(d)
Palladium(II) chloride	7647-10-1	712.30(w)
Paraffin waxes and hydrocarbon waxes, chlorinated	63449-39-8	716.120
Pentabromodiphenyl ether	32534-81-9	712.30, 716.120
Pentachlorobenzene	608-93-5	712.30(d), 716.120, 799.5055(c)
Pentachloroethane	76-01-7	721.497, 799.5055(c)
Pentane, 2,2,4-trimethyl-	540-84-1	716.120
2-Pentanone, 4-methyl-	108-10-1	712.30(d), 716.120
Phenanthrene	85-01-8	704.225(a)
Phenol	108-95-2	716.120
Phenol, 4-chloro-3,5-dimethyl-	88-04-0	712.30(w), 716.120
Phenol, 4-chloro-2-(phenylmethyl)-	120-32-1	712.30, 716.120
Phenol, 2,4-diamino-, dihydrochloride	137-09-7	712.30(f), 716.120
Phenol, 2,4-diamino-6-methyl-	15872-73-8	712.30(f), 716.120
Phenol, 4,6-diamino-2-methyl-, hydrochloride	65879-44-9	712.30(f), 716.120
Phenol, 4-(3,4-dihydro-2,2,4-trimethyl-2*H*-1-benzopyran-4-yl)-	472-41-3	716.120
Phenol, dimethyl-	1300-71-6	716.120
Phenol, dimethyl-, phosphate (3:1)	25155-23-1	712.30(d), 716.120
Phenol, (4-(1,1-dimethylethyl)-, phosphate (3:1)	78-33-1	712.30(d), 716.120
Phenol, methyl-	1319-77-3	712.30(d)
Phenol, 2-methyl-	95-48-7	712.30(d), 716.120, 799.1250
Phenol, 3-methyl-	108-39-4	712.30(d), 716.120, 799.1250
Phenol, 4-methyl-	106-44-5	712.30(d), 716.120, 799.1250
Phenol, 2,2'-methylene bis[4-chloro-	97-23-4	716.120
Phenol, (1-methylethyl)-	25168-06-3	712.30, 716.120
Phenol, 4,4'-(1-methyl ethylidene)bis-	80-05-7	712.30(k), 716.120, 799.940
Phenol, 4,4'-(1-methylethyl idene)bis[2,6-dibromo-	79-94-7	799.4000
Phenol, 4-nitro-	100-02-7	712.30, 716.120, 799.5055(c)
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	140-66-9	712.30(g), 716.120
Phenol, 2,2'-thiobis[4,6-dichloro-	97-18-7	716.120
Phenol, 2,4,6-tribromo-	118-79-6	712.30(d)
10*H*-Phenothiazine	92-84-2	716.120
2-Phenoxyethanol	122-99-6	712.30(h), 716.120
o-Phenylenediamine	95-54-5	799.3300
m-Phenylenediamine	108-45-2	799.3300
m-Phenylenediamine, sulfate salt	54-17-8	799.3300
p-Phenylenediamine	106-50-3	712.30(d), 716.120, 799.3300
p-Phenylenediamine, sulfate salt	16245-77-5	799.3300
Phosphine, triphenyl-	603-35-0	712.30(d)
Phosphonic acid, [1,2-ethanediyl bis[nitrilobis (methylene)]] tetrakis-, (EDTMPA).	1429-50-1	704.95
Phosphonic acid, [1,2-ethanediyl bis[nitrilobis (methylene)]] tetrakis-, ammonium salt.	57011-27-5	704.95
Phosphonic acid, [1,2-ethanediyl bis[nitrilobis (methylene)]] tetrakis-, hexasodium salt.	15142-96-8	704.95
Phosphonic acid, [1,2-ethanediyl bis[nitrilobis (methylene)]] tetrakis-, octaammonium salt.	68901-17-7	704.95
Phosphonic acid, [1,2-ethanediyl bis[nitrilobis (methylene)]] tetrakis-, potassium salt.	34274-30-1	704.95
Phosphonic acid, [1,2-ethanediylbis [nitrilobis (methylene)]] tetrakis-, tetrapotassium salt.	68188-96-5	704.95
Phosphoric acid, 2,2-bis(bromo methyl) -3-chloropropyl bis[2-chloro -1-(chloromethyl)ethyl] ester.	66108-37-0	712.30(d)
Phosphoric acid, dibutyl phenyl ester	2528-36-1	712.30(d), 716.120
Phosphoric acid, diisodecyl phenyl ester	51363-64-5	712.30(d), 716.120
Phosphoric acid, (1,1-dimethyl ethyl)phenyl diphenyl ester	56803-37-3	712.30(d), 716.120
Phosphoric acid, 2-ethylhexyl diphenyl ester	1241-94-7	712.30(d), 716.120

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Name(s) Used in Regulations	CAS No.	40 CFR Cites
Phosphoric acid, isodecyl diphenyl ester	29761-21-5	712.30(d), 716.120
Phosphoric acid, (1-methylethyl) phenyl diphenyl ester	28108-99-8	712.30(d)
Phosphoric acid, methylphenyl diphenyl ester	26444-49-5	712.30(d), 716.120
Phosphoric acid, (1-methyl-1-phenyl ethyl)phenyl diphenyl ester	34364-42-6	716.120
Phosphoric acid, tributyl ester	126-73-8	712.30(q), 716.120
Phosphoric acid, triphenyl ester	115-86-6	712.30(d), 716.120
Phosphoric acid, tris(methyl phenyl) ester	1330-78-5	712.30(d), 716.120
Phosphoric acid, tris(2-methyl phenyl) ester	78-30-8	712.30(d), 716.120
Phosphoric acid, tris(3-methyl phenyl) ester	563-04-2	716.120
Phosphoric acid, tris(4-methyl phenyl) ester	78-32-0	712.30(d), 716.120
Phosphorodithioic acid, *O,O*-diethyl- *S*-methyl ester	3288-58-2	716.120
Phosphorus	7723-14-0	712.30(w)
Phosphorus acid, diisodecyl phenyl ether	25550-98-5	712.30(p), 716.120, 799.5000
Phosphorus acid, trimethyl ester	121-45-9	712.30(d)
Polychlorinated *o*-terphenyl	11126-42-4	704.85, 716.120
Polychlorinated *p*-terphenyl	61788-33-8	704.85, 716.120
Poly(oxy-1,2-ethanediyl)-, α-[2-[bis(2-aminoethyl)methylammonio] ethyl]- ω-hydroxy-, *N,N'*-bis(hydrogenated tallow acyl) derivatives, methyl sulfates (salts).	68389-89-9	712.30(w), 716.120(a)(1)
Poly(oxy-1,2-ethanediyl)-, α-[2-[bis(2-aminoethyl) methylammonio] ethyl]- ω-hydroxy-, *N,N'*-di-C_{14-18} acyl derivatives, methyl sulfates (salts).	70914-09-9	712.30(w), 716.120(a)(1)
Poly(oxy-1,2-ethanediyl)-, α-[2-[bis(2-aminoethyl) methylammonio]ethyl]- ω-hydroxy-,*N,N'*-dicoco acyl derivatives, methyl sulfates (salts).	68389-88-8	712.30(w), 716.120(a)(1)
Poly(oxy-1,2-ethanediyl)-, α-[2-[bis(2-aminoethyl) methyl ammonio]ethyl]- ω-hydroxy-, *N,N'*-ditallow acyl derivatives, methyl sulfates (salts).	68410-69-5	712.30(w), 716.120(a)(1)
Poly(oxy-1,2-ethanediyl)-, α-[3-[bis(2-aminoethyl) methyl ammonio]-2- hydroxypropyl]-ω-hydroxy-, *N*-coco acyl derivatives, methyl sulfates (salts).	68554-06-3	712.30(w), 716.120(a)(1)
Poly(oxy-1,2-ethanediyl)-, α-[4-oxiranylmethoxy)benzoyl]-ω-[[4-(oxiranylmethoxy) benzoyl]oxy]-.	69943-75-5	716.120
Poly[oxy(methyl-1,2-ethanediyl)]-, [2-[bis(2-aminoethyl)methylammonio]methylethyl]-ω-hydroxy-, *N,N'*-ditallow acyl derivatives, methyl sulfates (salts).	68413-04-7	712.30(w), 716.120(a)(1)
1-Propanamine	107-10-8	716.120
2-Propanamine, 1-chloro-*N,N'*-dimethyl-, hydrochloride	17256-39-2	712.30(d)
1-Propanamine, *N*-propyl-	142-84-7	716.120
Propane, 1-chloro-	540-54-5	716.120
Propane, 2-chloro-	75-29-6	716.120
Propane, 1,2-dibromo-3-chloro-	96-12-8	712.30(d)
Propane, 1,1-dichloro-	78-99-9	716.120
Propane, 1,2-dichloro-	78-87-5	712.30(d), 716.120, 799.1550
Propane, 1,3-dichloro-	142-28-9	712.30, 716.120
Propane, 2,2-dichloro-	594-20-7	716.120
Propane, 1,2-epoxy-3-(*p*-nonylphenoxy)-	6178-32-1	716.120
Propane, 2-methoxy-2-methyl-	1634-04-4	712.30(l), 716.120
Propane, 2,2'-oxybis[1-chloro-	108-60-1	716.120, 799.5055(c), (d)(2)
Propane, 1,1,1,2-tetrachloro-	812-03-3	716.120
Propane, , 1,1,1,3-tetrachloro-	1070-78-6	716.120
Propane, 1,1,2,3-tetrachloro-	18495-30-2	716.120
Propane, 1,2,3-trichloro-	96-18-4	716.120
Propanedinitrile	109-77-3	716.120, 799.5055 (c), (d)(1), (e)(1)
1,3-Propanediol, 2,2-bis(bromoethyl)-	3296-90-0	716.120
Propanenitrile, 2-hydroxy-	78-97-7	716.120
Propanenitrile, 2-hydroxy-2-methyl-	75-86-5	716.120
2-Propanol	67-63-0	712.30(l), 716.120
2-Propanol, 1-butoxy-	5131-66-8	712.30, 716.120
2-Propanol, 1-(2-butoxyethoxy)-	124-16-3	712.30, 716.120
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2-Propanol, 1,3-dichloro-	96-23-1	799.5055(c)
2-Propanol, 1-methoxy-	107-98-2	712.30, 716.120
Propanol, (2-methoxymethylethoxy)-	34590-94-8	712.30, 716.120
Propanol, [2-(2-methoxy methylethoxy) methylethoxy]-	25498-49-1	712.30, 716.120
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2-Propanone, 1-bromo-	598-31-2	716.120
2-Propanone, 1,3-dichloro-	534-07-6	716.120
2-Propenamide	79-06-1	712.30(d), 716.120
1-Propene, dichloro-	26952-23-8	716.120

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1-Propene, 1,1-dichloro-	563-58-6	716.120
1-Propene, 1,2-dichloro-	563-54-2	716.120
1-Propene, 1,3-dichloro-	542-75-6	716.120
1-Propene, 2,3-dichloro-	78-88-6	716.120
1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	716.120
1-Propene, 1,1,2,3,3,3-hexafluoro-	116-15-4	712.30(d), 716.120, 799.1700(a)(1)
1-Propene, 1, ,1,2,3-tetrachloro-	10436-39-2	716.120
2-Propenoic acid, sodium salt	7446-81-3	712.30(d)
2-Propenoic acid, bicyclo[2.2.1] hept-5-en-2-ylmethyl ester	95-39-6	712.30(d)
2-Propenoic acid, butyl ester	141-32-2	712.30(d)
2-Propenoic acid, 2-cyanoethyl ester	106-71-8	712.30(d)
2-Propenoic acid, decyl ester	2156-96-9	712.30(d)
2-Propenoic acid, 2,3-dibromopropyl ester	19660-16-3	716.120
2-Propenoic acid, 2-(diethylamino)ethyl ester	2426-54-2	712.30(d)
2-Propenoic acid, 1,1-dimethylethyl ester	1663-39-4	712.30(d)
2-Propenoic acid, 2,2-dimethyl- 1,3-propanediyl ester	2223-82-7	712.30(d)
2-Propenoic acid, 2,2-dinitro-propyl ester	17977-09-2	712.30(d)
2-Propenoic acid, 2-ethoxyethyl ester	106-74-1	712.30(d)
2-Propenoic acid, ethyl ester	140-88-5	712.30(d), 716.120
2-Propenoic acid, 2-ethylbutyl ester	3953-10-4	712.30(d)
2-Propenoic acid, 2-ethylhexyl ester	103-11-7	712.30(d)
2-Propenoic acid, 3a,4,5,6, 7,7a-hexahydro- 4,7-methano-1*H*-indenyl ester.	33791-58-1	712.30(d)
2-Propenoic acid, 1,6-hexanediyl ester	13048-33-4	712.30(d)
2-Propenoic acid, hexyl ester	2499-95-8	712.30(d)
2-Propenoic acid, 2-hydroxyethyl ester	818-61-1	712.30(d)
2-Propenoic acid, isodecyl ester	1330-61-6	712.30(d)
2-Propenoic acid, methyl ester	96-33-3	712.30(d)
2-Propenoic acid, 1-methylethyl ester	689-12-3	712.30(d)
2-Propenoic acid, 2-methylpropyl ester	106-63-8	712.30(d)
2-Propenoic acid, monoester with 1,2-propanediol	25584-83-2	712.30(d)
2-Propenoic acid, oxiranylmethyl ester	106-90-1	712.30(d), 716.120
2-Propenoic acid, propyl ester	925-60-0	712.30(d)
2-Propenoic acid, tridecyl ester	3076-04-8	712.30(d)
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2-Propenoic acid, 2-methyl-, 2-[bis(1-methyl ethyl) amino]ethyl ester.	16715-83-6	712.30(d)
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester	2082-81-7	712.30(d)
2-Propenoic acid, 2-methyl-, butyl ester	97-88-1	712.30(d), 716.120
2-Propenoic acid, 2-methyl-, cyclohexyl ester	101-43-9	712.30(d)
2-Propenoic acid, 2-methyl-, 2-(diethylamino) ethyl ester	105-16-8	712.30(d)
2-Propenoic acid, 2-methyl-, 2-(dimethylamino) ethyl ester	2867-47-2	712.30(d)
2-Propenoic acid, 2-methyl-, 2-[(1,1,-dimethylethyl) amino]ethyl ester.	3775-90-4	712.30(d)
2-Propenoic acid, 2-methyl-, dodecyl ester	142-90-5	712.30(d)
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester	97-90-5	712.30(d), 799.5055(c), (d)(2)
2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis (oxy-2,1-ethanediyl) ester.	109-16-0	712.30(d)
2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2	712.30(d)
2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester	688-84-6	712.30(d)
2-Propenoic acid, 2-methyl-, hexyl ester	142-09-6	712.30(d)
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester	868-77-9	712.30(d)
2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	712.30(d), 716.120
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2-Propenoic acid, 2-methyl-, octadecyl ester	32360-05-7	712.30(d)
2-Propenoic acid, 2-methyl-, oxiranylmethyl ester	106-91-2	712.30(d), 716.120
2-Propenoic acid, 2-methyl-, oxydi-2,1-ethanediyl ester	2358-84-1	712.30(d)
2-Propenoic acid, 2-methyl-, 2-propenyl ester	96-05-9	712.30(d)
2-Propenoic acid, 2-methyl-, propyl ester	2210-28-8	712.30(d)
2-Propenoic acid, 2-methyl-, [tetrahydro-2- furanyl]methyl ester	2455-24-5	712.30(d)
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester	2530-85-0	712.30(d)
2-Propenoic acid, 2-methyl-, 1,7,7-trimethyl bicyclo [2.2.1]hept-2-yl ester, *exo*.	7534-94-3	712.30(d)
Propylene oxide	75-56-9	712.30(d), 716.120, 799.3450
2-Propyn-1-ol	107-19-7	716.120
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Pyridine	110-86-1	712.30(d), 716.120
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4-Pyridinecarbonitrile	100-48-1	716.120
Quinone	106-51-4	712.30(d), 716.120
Selenium	7782-49-2	712.30(w)
Semicarbazide hydrochloride	563-44-7	704.225(a)
Silane, [(3-chloropropyl) dimethoxy[3-(oxiranyl methoxy)propyl]-	71808-64-5	716.120
Silane, diethoxymethyl[3-(oxiranyl methoxy)propyl]-	2897-60-1	716.120
Silane, ethoxydimethyl[3-(oxiranyl methoxy)propyl]-	17963-04-1	716.120
Silane, trimethoxy[3-(oxiranyl methoxy)propyl]-	2530-83-8	712.30(d), 716.120
Silver	7440-22-4	712.30(w)
Silver nitrate	7761-88-8	712.30(w)
Sodium fluoride	7681-49-4	712.30(w)
Stannane, dibutylbis(dodecylthio)-	1185-81-5	712.30(g), 716.120
Stannane, dibutylbis [(1-oxododecyl)oxy]-	77-58-7	712.30(g), 716.120
Sulfuric acid, diethyl ester	64-67-5	712.30(d)
Sulfuric acid, dimethyl ester	77-78-1	712.30(d)
o-Terphenyl, polychlorinated	11126-42-4	704.85, 716.120
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Tetrabromobisphenol A	79-94-7	712.30(o), 716.120, 799.4000
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1,2,4,5-Tetrachlorobenzene	95-94-3	712.30(d), 716.120, 799.1054, 799.5055(c)
Tetraphosphoric acid, hexaethyl ester	757-58-4	716.120
Tetrasiloxane, 1,1,1,3,5,7,7,7 -octamethyl -3,5-bis-[3-(oxiranylmethoxy) propyl]-.	69155-42-6	716.120
Thallium	7440-28-0	716.120
Thioperoxydicarbonic diamide, tetramethyl-	137-26-8	716.120
Thiourea, (2-chlorophenyl)-	5344-82-1	716.120
Toluene	108-88-3	712.30(d), 716.120
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Trichloromethanethiol	75-70-7	799.5055(c)
Triethanolamine	25498-49-1	712.30, 716.120
Triethylene glycol monobutyl ether	143-22-6	712.30(o), 716.120, 799.5000
Triethylene glycol monoethyl ether	112-50-5	712.30(o), 716.120, 799.5000
Triethylene glycol monomethyl ether	112-35-6	712.30(o), 716.120, 799.4440, 799.5000
Tripropylene glycol monomethyl ether	102-71-6	712.30, 716.120
Tris(2-chloroethyl) phosphate	115-96-8	704.225(a)
Tris(2,3-dibromopropyl) phosphate	126-72-7	704.205, 721.1021
Tris(2-ethylhexyl) trimellitate	3319-31-1	712.30(g), 716.120
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Redesignation Table I

Regulations issued by EPA were recodified at 47 FR 19526, May 6, 1982, to provide for a more orderly organization of the material.

For the convenience of the user, the following table shows the relationship of the old CFR section numbers to the new section numbers in Part 761.

New section	Old section
761.1	761.1
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761.20	761.30
761.30	761.31
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761.45	761.44
761.60	761.10
761.65	761.42
761.70	761.40
761.75	761.41
761.79	761.43
761.180	761.45

Redesignation Table II

At 53 FR 2845, Feb. 2, 1988, the redesignation of subpart B to subpart E was made for a more orderly and symmetrical development of regulations under 40 CFR Part 721. The following redesignation table has been included for the convenience of the user.

Old section	New section
721.109	721.350
721.120	721.400
721.180	721.520
721.195	721.550
721.205	721.575
721.230	721.600
721.290	721.800
721.320	721.950
721.324	721.975
721.342	721.1150
721.347	721.1175
721.350	721.1200
721.370	721.1250
721.385	721.1300
721.497	721.1475
721.575	721.1750
721.615	721.1875
721.975	721.2100
721.1021	721.2200
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List of CFR Sections Affected

All changes in this volume of the Code of Federal Regulations which were made by documents published in the FEDERAL REGISTER since January 1, 1973 are enumerated in the following list. Entries indicate the nature of the changes effected. Page numbers refer to FEDERAL REGISTER pages. The user should consult the entries for chapters and parts as well as sections for revisions.

Title 40 was established at 36 FR 12213, June 29, 1971. For the period before January 1, 1973, see the "List of CFR Sections Affected, 1964-1972", which is published in a separate volume.

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(No regulations published)

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750.11 Added...............................50906
750.12 Added...............................50906
750.13 Added...............................50906
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750.21 Added...............................50907
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